CALIFORNIA BAY DELTA FEDERAL CROSS-CUT

Fiscal Year 2015

Agency Activities, Projects, and Programs contributing to the Environmental Restoration of California's Bay Delta

FISCAL YEAR 2015

U.S. FISH AND WILDLIFE SERVICE

Renewed Federal State Partnership

Authority: Anadromous Fish Conservation Act, (P.L. 89-304), Endangered Species Act of 1973, as amended, (16 U.S.C. 1531-1544), Fish and Wildlife Act of 1956, as amended, (16 U.S.C. 742(a)-754), Fish and Wildlife Conservation Act, as amended, (16 U.S.C. 2901-2911), Fish and Wildlife Coordination Act, as amended, (16 U.S.C. 661-666(e)), and the Partners for Fish and Wildlife Act, (16 U.S.C. 3771 et. seq.).

FY 2015 Budget Request: $793,000

Project Description: The U.S. Fish and Wildlife Service (Service) is working to build and maintain Federal and State partnerships that are invested in restoring the Bay-Delta. With support from our partners, the Service will identify water flow and habitat restoration actions to recover endangered and sensitive species and their habitats as well as address long-term critical water issues facing California. These efforts support the Bay-Delta Conservation Plan (BDCP) and the Administration's Interim Federal Action Plan (IFAP).

Proposed Actions for 2015:

- Following the conclusion of the scientific and public review processes that are underway, a final BDCP will be completed as soon as feasible.
- Associated with the IFAP, the Service will work to align and function with new California State legislation focused on efforts to restore the Bay-Delta Estuary and better meet the State's water needs.
- The Service will continue to work with State and local interests to plan and implement activities under the IFAP.

Smarter Water Supply & Use

Authority: Endangered Species Act of 1973, as amended, (16 U.S.C. 1531-1544), Fish and Wildlife Act of 1956, as amended, (16 U.S.C. 742(a)-754), Fish and Wildlife Conservation Act, as amended, (16 U.S.C. 2901-2911), and the Fish and Wildlife Coordination Act, as amended, (16 U.S.C. 661-666(e)).

FY 2015 Budget Request: $987,000

Project Description: The Service will continue to collaborate with other Federal, state and local agencies to promote opportunities to maximize water supply for California. The Service will provide the technical expertise and environmental reviews to improve water conservation and management.

Proposed Actions for 2015:

- The Service will participate in consideration and implementation of smart water supplies and its uses during BDCP planning and implementation efforts.
- Associated with the IFAP, Federal agencies will align their water conservation programs and focus efforts to help reduce demand in targeted regions. One of the most important features of the recently-enacted State legislation is the adoption of State-wide conservation strategies as a part of a comprehensive water supply plan for California's future. The Service will facilitate IFAP implementation by providing technical assistance and environmental review.

Habitat Restoration

Authority: Anadromous Fish Conservation Act, (P.L. 89-304), Endangered Species Act of 1973, as amended, (16 U.S.C. 1531-1544), Fish and Wildlife Act of 1956, as amended, (16 U.S.C. 742(a)-754), Fish and Wildlife Conservation Act, as amended, (16 U.S.C. 2901-2911), Fish and Wildlife Coordination Act, as amended, (16 U.S.C. 661-666(e)), Migratory Bird Conservation Act, (16 U.S.C. 715-715d), National Wildlife Refuge System Administration Act of 1966, as amended, (16 U.S.C. 668dd et. Seq.), The National Wildlife Refuge System Improvement Act of 1997, (P.L. 105-57), and the Partners for Fish and Wildlife Act, (16 U.S.C. 3771 et. seq.).

FY 2015 Budget Request: $4,037,000

Project Description: The Service is leading habitat restoration activities within the Bay-Delta Estuary. This includes working with other Federal, State, and local agencies to plan and implement numerous programs, including the CALFED Ecosystem Restoration Program, Bay Delta Conservation Program, portions of the Interim Federal Action Plan, the Central Valley Joint Venture, the Cooperative Endangered Species Conservation Fund, Endangered Species Recovery Program, Partners for Fish and Wildlife Program, Land Acquisition Program, the North American Wetlands Conservation Fund, and the Interagency Ecological Program. This overall effort so far has resulted in thousands of acres of restored and conserved habitats, providing benefits to numerous fish and wildlife species and the American public.

Proposed Actions for 2015:

- The Service will continue to assist implementing Ecosystem Restoration Program restoration grants and to work to approve additional projects as funding and authorization allow.
- The Service will reinforce cross-agency collaboration in its Bay-Delta Non-Native Invasive Species (NIS) program. The program will focus on preventing the introduction of new invasives (ex., quagga mussels), limiting or eradicating existing invasives (ex., *Egeria densa*), and reducing adverse impacts from infestations.
- The Service's work on the BDCP will assist that effort to identify and implement a set of water flow and habitat restoration actions to contribute to recovery of endangered and sensitive species and their habitats in the Bay-Delta Estuary.
- The Service will continue in the Federal, State, and City partnership, led by the Service, to support development of a facility designed to support the propagation and restoration of Delta native fish species.

- The Service will participate in short-term habitat restoration efforts such as restoration of flows on the San Joaquin River from Friant Dam to the confluence of the Merced River, and in efforts to restore self-sustaining habitat in Battle Creek, Cache Slough, and the Yolo Bypass Floodplain.
- The Service estimates it will restore, enhance and protect thousands of acres of Delta and Delta watershed wetland and waterfowl-friendly agricultural habitats and will secure full water supplies for Central Valley State and Federal refuges.
- The Service will award Cooperative Endangered Species Conservation Fund grants as appropriate, based on regional and national competitions and program criteria.
- The Service, working with numerous landowners, estimates it will restore thousands of acres of Delta and Delta watershed wetland, riparian, and instream habitat for numerous fish and wildlife species and will provide extensive technical assistance.

Drought & Floodplain Management

Authority: Endangered Species Act of 1973, as amended, (16 U.S.C. 1531-1544), Fish and Wildlife Act of 1956, as amended, (16 U.S.C. 742(a)-754), Fish and Wildlife Conservation Act, as amended, (16 U.S.C. 2901-2911), and the Fish and Wildlife Coordination Act, as amended, (16 U.S.C. 661-666(e)).

FY 2015 Budget Request: $143,000

Project Description: The Service is participating with other Federal and state agencies to provide drought protection and floodplain management in California's Central Valley and Bay-Delta Estuary region.

Proposed Actions for 2015:
- The Service will continue to participate in planning and rapid response for permitting actions associated with drought protection in the State of California.
- The Service will participate with California's flood management effort, including participation in the Department of Water Resource's Delta Levees Flood Protection Program, FloodSAFE California Program and Central Valley Flood Protection Plan; and will continue to participate with the U.S. Army Corps of Engineers in its efforts to provide flood protection in the Delta and Delta watershed area.

FISCAL YEAR 2015

USDA NATURAL RESOURCES CONSERVATION SERVICE

Renewed Federal State Partnership

Authority: Public Law 74-46, The Soil Conservation and Domestic Allotment Act of 1935 and The Soil and Water Resources Conservation Act of 1977, Conservation Operations.

FY 2015 Budget Request (000's): Included in base budget for Conservation Operations

Project Description: NRCS provides technical assistance for natural resource concerns with emphasis on conservation planning for on-farm owner/operators, non-industrial private forestland owners, and Tribes. NRCS works closely with other Federal, State, local, and environmental constituents on Bay Delta conservation issues.

Current Status: NRCS provides Federal leadership for the International Federation of Agricultural Producers (IFAP) on-farm conservation activities. NRCS actively participates in numerous IFAP related Federal and State working groups related to Bay Delta planning and implementation coordination efforts.

Smarter Water Supply & Use

Authority: Environmental Quality Incentive Program, 16 U.S.C. 3839aa--aa-8; The Soil Conservation and Domestic Allotment Act of 1935 and The Soil and Water Resources Conservation Act of 1977, Conservation Operations.

FY 2015 Budget Request (000's): Included in base budget for Conservation Operations

Project Description: NRCS provides technical assistance for on-farm water conservation and water quality planning with owner/operators, assists non-industrial private forestland owners to reduce sediment for cleaner water supply, and assists tribal landowners and Tribes with water supply related conservation planning through its Conservation Operations authority, and provides technical and financial assistance to agricultural producers and non-industrial private landowners (including Tribes) to assist with water conservation and other natural resource concerns through the Farm Bill authorities.

Current Status: NRCS provides Federal leadership for on-farm water conservation activities, and provides technical and financial assistance to agricultural producers to assist with water conservation and other IFAP natural resource concerns. NRCS works closely with other Federal, State, local, and environmental constituents on water conservation issues through the State Technical Committee. NRCS is partnering with Reclamation on IFAP water conservation opportunities.

Water Conservation and Water Quality Projects

Authority: Environmental Quality Incentives Program, 16 U.S.C. 3839aa—aa-8. .

FY 2015 Budget Request (000's): EQIP: $33,875 _____;

Project Description: EQIP has on-farm water conservation as an eligible financial assistance project. Signups are held at local service centers located in the Bay Delta geographic area. Approved projects optimize environmental benefits while addressing natural resource concerns and are awarded based on local ranking criteria consistent with the performance goals of NRCS EQIP and complementing the Water Supply category of IFAP. NRCS is partnering with Reclamation on IFAP water conservation opportunities and continues to do so. NRCS will make additional EQIP available to the agricultural producers' on-farm in Reclamation project areas.

Agricultural Water Enhancement Program (AWEP) complements the IFAP Water Supply objectives by improving water conservation and water quality on-farm. Signups under nationally approved AWEPs are held at local service centers within the Bay Delta and delineated AWEP geographic area. Approved projects optimize environmental benefits while addressing natural resource concerns and are awarded based on criteria consistent with the performance goals of NRCS AWEP. A unique feature of AWEP is that partners such as irrigation districts can request financial assistance targeted for their participants' on-farm water conservation that is not otherwise available to them since EQIP is usually oversubscribed.The 2014 Farm Bill eliminated AWEP so contracts are limited to completing existing approved projects.

Current Status: Initial allocation of $__17,350____ has been received for FY 2014 for EQIPand $$5,000 for AWEP, we expect final allocation late April.

Habitat Restoration

Authority: Environmental Quality Incentive Program, 16 U.S.C. 3839aa—aa-8; Public Law 74-46, The Soil Conservation and Domestic Allotment Act of 1935 and The Soil and Water Resources Conservation Act of 1977, Conservation Operations.

FY 2015 Budget Request (000's): Included in base budget for Conservation Operations**.**

Project Description: NRCS provides technical assistance for natural resource concerns with emphasis on conservation planning for on-farm owner/operators, non-industrial private forestland owners, and Tribes through its Conservation Operations authority, and provides technical and financial assistance to producers to assist with their natural resource concerns through the Farm Bill.

Current Status: NRCS continues to provide Federal leadership for on-farm natural resources conservation activities and other natural resource concerns.

Habitat Restoration Projects

Authority: Environmental Quality Incentive Program (EQIP), 16 U.S.C. 38399aa—aa-8. Agricultural Conservation Easement Program, Subtitle I of Title XII of the Food Security Act of 1985, as amended.

FY 2015 Budget Request (000's): ACEP: $_18,000____; EQIP: $_4,200____.

Project Description: Implement projects using Agricultural Conservation Easement Program (ACEP) funding which complement the objectives contained in the IFAP Habitat Restoration Program and the objectives of ACEP. The objectives of the Wetlands Reserve Easement component of ACEP are to achieve the greatest wetland functions and values, along with optimum wildlife habitat, on every acre enrolled in the program. This is done through the enrollment of conservation easements on private lands; restoration and protection of wetlands in agricultural settings; removal of environmentally sensitive, marginal cropland from cultivation; and assistance to landowners for restoration of wetland hydrology which will contribute to the national goal of no net loss of wetlands. Signups are held at local service centers located in the Bay Delta geographic area. Applications will be ranked using state-wide ranking criteria. Approved projects optimize environmental benefits while addressing natural resource concerns and are awarded based on their state-wide rank consistent with the goals of NRCS's ACEP. NRCS provided nearly $____$15,520___million in addition to California's base WRP allocation in FY2013 to support wetlands restoration and protection in the Bay Delta region.
Implement projects using Environmental Quality Incentive Program (EQIP) payments which complement the objectives contained in the IFAP Habitat Restoration Program for riparian and aquatic ecosystem restoration while focusing on-farms. Signups are held at local service centers located in the Bay Delta geographic area. Approved projects will optimize environmental benefits while addressing natural resource concerns and are awarded based on criteria consistent with the performance goals of NRCS's EQIP.

Current Status: Initial allocations have not been received for FY 2014 for WRP in the Bay Delta.We expect final allocation in April. California NRCS has expanded its field based wetlands teams and expects ACEP-WRE applications to expand proportionately.

Drought & Floodplain Management

Authority: Emergency Watershed Protection Program- Floodplain Easement Program (EWPP-FPE) is authorized by 16 U.S.C. 2203. Environmental Quality Incentive Program, 16 U.S.C. 3839aa—aa-8; Public Law 74-46, The Soil Conservation and Domestic Allotment Act of 1935 and The Soil and Water Resources Conservation Act of 1977, Conservation Operations.

FY 2015 Budget Request (000's): Included in base budget for Conservation Operations which supplies technical assistance. There is no current need for specific project funding.

Project Description: Implement projects using the Floodplain Easement Program (FPE) funding as provided through the Emergency Watershed Protection Program (EWPP). EWPP provides for the purchase of floodplain easements as an emergency measure, and since 1996, the Natural Resources Conservation Service (NRCS) has purchased floodplain easements on lands that qualify for EWPP assistance. Floodplain easements restore, protect, maintain, and enhance the functions of the floodplain; conserve natural values including fish and wildlife habitat, water quality, flood water retention, ground water recharge, and open space; reduce long-term federal disaster assistance; and safeguard lives and property from floods, drought, and the products of erosion. FPE complements the objectives contained in the IFAP. While this program provides significant value-added floodplain benefits, all existing backlog requests from prior emergencies in Bay Delta geographic area and other parts of California have been filled with the ARRA funding authorization.

Implement on-farm water conservation projects to augment limited existing water supply through the Environmental Quality Incentive Program (EQIP) if emergency drought declarations indicate need. NRCS provided $10 million in addition to California's base EQIP allocation in FY2010 to assist irrigators within the San Joaquin Valley with the reduced water allocations through both the Federal and State Water Projects. In FY2014 NRCS is providing $25 million in EQIP statewide to assist with current severe drought and reduced water allocations from both Federal and State Water Projects.
In addition, in FY2014 NRCS is making $5 million in Emergency Watershed Protection (EWP) funding available statewide to sponsoring units of government to provide protective cover over large areas of land that are severely impacted by the drought and reductions in water allocation from both Federal and State Water Projects and local water districts. CA has experienced prior severe windblown soil erosion and twice used EWP to assist, most recently in the Klamath Basin in 2000 and in the Antelope Valley in early 1990s.
Current Status: When emergency conditions indicate a need for emergency assistance, requests are made for funding consideration. NRCS is providing $25 million in EQIP statewide to assist with unprecedented drought conditions in 54 of the State's 57 counties. EQIP eligible conservation practices include water use efficiency on irrigated lands, providing conservation cover on highly erodible lands subject to severe windblown erosion if they are not irrigated, and assisting grazing lands with water supply for livestock. NRCS is providing $5 million statewide in EWP funds to assist with severe soil resource issues resulting from drought.

FISCAL YEAR 2015

BUREAU OF RECLAMATION

Renewed Federal State Partnership

CALFED Program Management, Oversight, and Coordination

Authority: P.L. 108-361, Title I, Section 103 (f) (4)

FY 2015 Budget Request (000's): $1,700

Project Description: Activities include Program support; program-wide tracking of schedules, finances, and performance; agency oversight and coordination of Program activities to ensure program balance and integration; development of agency crosscut budget; coordination of public outreach and involvement, including tribal, environmental justice, and public advisory activities; and Reclamation's administration of the storage, conveyance, water use efficiency, ecosystem restoration, science, and water transfer programs.

Smarter Water Supply & Use

Water Conservation

Authority: P.L. 97-293 Section 210, P.L. 102-575, Section 3405 (e), P.L. 111-11

FY 2015 Budget Request (000's): $3,300

Project Description: The Mid-Pacific Regional Office's Water Conservation Team (Team) administers the Central Valley Project (CVP) Water Conservation Program (Program) activities with assistance from the Area Offices. The Team performs duties required under the Central Valley Project Improvement Act of 1992 (CVPIA) (P.L. 102-575) and the Reclamation Reform Act of 1982 (RRA) (P.L. 97-293), which includes the development and administration of various Criteria – the Standard Criteria for Evaluating Water Management Plans, the Regional Criteria for the Sacramento Valley, and the Criteria for Developing Refuge Water Management Plans. Section 3405 (e) of the CVPIA, P.L. 102-575, directs the Secretary of the Interior to establish and administer an office of Central Valley water conservation best management practices that shall ". . . develop criteria for evaluating the adequacy of all water conservation plans developed by project contractors, including those plans required by Section 210 of the RRA, Public Law 97-293."

In FY 2013, the Team implemented water conservation measures through a competitive, water use efficiency grant program offered to water districts, irrigation districts, resource conservation districts, urban water agencies, etc. This program is designed to encourage cost shared water conservation projects that meet the objectives contained in the CALFED Water Use Efficiency Program. Benefits of the awarded projects will include increased water supply reliability, water quality improvements, and contributions to ecosystem restoration. In addition, the funds will assist water contractors with

the implementation of Best Management Practices, while focusing on water districts with a CALFED Bay-Delta connection.

Additionally in FY 2011, as a result of the Interim Federal Action Plan, Reclamation and U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) formed a partnership under Reclamation's WaterSMART program as a pilot project. Due to the success of this partnership, Reclamation and NRCS are continuing the collaborative process through the Bay-Delta Restoration Program: Agricultural Water Conservation and Efficiency Grants. Water Conservation and water use efficiency are critical elements of any plan to address Bay-Delta water issues. With leveraged water sustainability grants, an important step will be taken towards increasing conservation for a more efficient use of water in California. Under this Funding Opportunity Announcement (FOA), Reclamation selects projects at a district or water purveyor level that also increase opportunities for on-farm improvements. In coordination with NRCS, Reclamation selects applicants for funding under this FOA. Successful applicants will enter into a financial assistance agreement with Reclamation. Once projects have been selected under this FOA, NRCS will provide accelerated technical and financial assistance to farmers and ranchers in the successful applicant's service area, through USDA programs such as Environmental Quality Incentives Program or Agricultural Water Enhancement Program.

Current Status: The Team continues to provide Federal leadership and expertise required to evaluate plans and water use efficiency projects. The Team provides technical and financial assistance to water districts to prepare plans and implement conservation measures. The competitive grant process was completed and 8 projects were awarded by September of 2013. Through multiple public outreach efforts, Reclamation is maintaining an active water conservation program for its contractors and the public. Program staff works closely with other Federal, State, local, and environmental constituents on water conservation issues and policy development. The Conservation Connection Newsletter and the WaterShare website www.usbr.gov/mp/watershare are used to inform the public on Mid-Pacific Region water conservation activities and grant opportunities.

Proposed Actions for FY 2015: A majority of the funding will be used to fund and administer grant programs offered to water districts, irrigation districts, resource conservation districts, and urban water agencies through the Bay-Delta Restoration Program: CALFED Water Use Efficiency Grants, and Agricultural Water Conservation and Efficiency Grants. These programs fund projects that provide benefits to the Bay-Delta through water conservation activities to facilitate criteria revision, water conservation plan reviews, tracking of annual milestones, administer additional grant projects, provide technical assistance, publish newsletters, and host the WaterShare website.

Los Vaqueros Expansion Feasibility Study

Authority: P.L. 108-7, Section 215, Title II, Division, February 20, 2003; P.L. 108-137, Title II, Section 211, December 1, 2003

FY 2015 Budget Request (000's): $100

Project Description: Reclamation, the California Department of Water Resources, and Contra Costa Water District (CCWD) completed a small expansion of Los Vaqueros Reservoir in 2012.

Reclamation and partners were conducting a Feasibility Study but did not complete a formal report when CCWD elected to construct a small expansion with district funds. Reclamation and CCWD are continuing to investigate options to expand the current 160,000 acre-foot reservoir to 275,000 acre-feet. The planning objective is to develop water supplies for environmental water management, to improve water supply reliability for Bay Area users, and improve the quality of water delivered to Bay Area agencies from the Delta.

Current Status: Activities in FY 2014 include continuing studies that were funded in prior years plus oversight and review of activities under existing contracts. Activities will include reformulation and refinement of an array of preliminary alternative plans, and analysis of potential benefits.

Reclamation and non-cost sharing partners are assessing the effects of emerging Federal and State water management initiatives to refine the study strategy, schedule, and budget to accommodate continuing change and uncertainty. The requirements and challenges in developing a reliable plan for improving conveyance through or around the Delta have exacerbated the physical, regulatory, and economic uncertainties about the reasonably foreseeable future conditions thereby increasing the difficulty of assessing the potential benefits, impacts and costs of alternative plans. Consideration of these issues requires iterative refinement and reevaluation of alternatives but cannot be accomplished without a non-Federal cost share.

Proposed Actions for FY 2015: Funds would be used to complete studies funded in prior years, developing alternatives, and analyzing potential benefits as the analysis of proposals to improve conveyance through or around the Delta progress. There would be limited stakeholder coordination and public involvement and outreach without a non-Federal cost share partner.

Upper San Joaquin River Basin Storage Investigation

Authority: P.L. 108-7, Section 215, Title II, Division, February 20, 2003; P.L. 108-137, Title II, Section 211, December 1, 2003

FY 2015 Budget Request (000's): $1,450

Project Description: Reclamation is continuing a Feasibility Study in cooperation with the California Department of Water Resources (DWR) as the non-Federal non-cost sharing partner that will culminate in publication of a Feasibility Report/Decision Document and EIS/EIR for the Upper San Joaquin River Basin Storage Investigation. The purpose of the study is to determine the type and extent of Federal interest in a multiple purpose project to provide additional storage in the upper San Joaquin River watershed. The primary planning objectives are to improve water supply reliability and system operational flexibility for agricultural, urban (municipal and industrial), and environmental uses; and enhance water temperature and flow conditions in the San Joaquin River from Friant Dam to the Merced River. Secondary objectives include flood damage reduction, water quality, recreation, and hydropower.

Current Status: Activities in FY 2014 include continuing planning, engineering, environmental, economic, and other studies needed to evaluate alternatives and to produce the Draft Feasibility Report and Draft EIS/EIR. Specific activities include public and stakeholder involvement, consideration of comments received on the Draft Feasibility Report analyses of potential physical

and operational impacts; identification of mitigation requirements; feasibility level engineering designs and cost estimates, including real estate costs; evaluation of potential cost and benefits; and preliminary cost allocation and financial analysis.

Reclamation and non-cost sharing partners are assessing the effects of emerging Federal and State water management initiatives to refine the study strategy, schedule, and budget to accommodate continuing change and uncertainty. The requirements and challenges in developing a reliable plan for improving conveyance through or around the Delta have exacerbated the physical, regulatory, and economic uncertainties about the reasonably foreseeable future conditions thereby increasing the difficulty of assessing the potential benefits, impacts and costs of alternative plans. Consideration of these issues requiring iterative refinement and reevaluation of alternatives is essential.

Proposed Actions for FY 2015: Funds would be used to respond to public comments on the Draft EIS/EIR and Draft Feasibility Report, continue stakeholder coordination and public involvement and outreach, refine engineering, environmental, economic, financial, and other studies in order to prepare and process a Final Feasibility Report/EIS/EIR by December 2015.

North of Delta Off-Stream Storage (Sites Reservoir) Investigation

Authority: P.L. 108-7, Section 215, Title II, Division, February 20, 2003; P.L. 108-137, Title II, Section 211, December 1, 2003

FY 2015 Budget Request (000's): $100

Project Description: Reclamation is conducting the investigation in cooperation with DWR as the non-Federal non-cost sharing partner to determine the type and extent of Federal interest in a multiple purpose project to provide up to 1.8 million acre-feet of off-stream water storage in the Sacramento Valley. The proposed project would increase water supply to help meet existing contract requirements, including improved water supply reliability and greater flexibility in water management for agricultural, municipal, and environmental purposes; increase the survival of anadromous fish populations in the Sacramento River, as well as the survivability of other aquatic species; improve drinking and environmental water quality in the Delta; and provide flexible generation through a daily pump-back operation which would help integrate wind, and solar energy into the electrical grid. The investigation includes planning and technical analyses and determinations of engineering, environmental, economic, and financial feasibility as the basis for any recommended Federal investment in a water management project.

Current Status: Activities in FY 2014 include completing the Progress Report that was released in December 2013 to update decision makers, stakeholders, and the public on the status and findings of the investigation to date. Reclamation is continuing to develop feasibility-level designs and cost estimates and coordinating with the Sites Joint Powers Authority as they develop a locally preferred alternative.

Reclamation and non-cost sharing partners are assessing the effects of emerging Federal and State water management initiatives to refine the study strategy, schedule, and budget to accommodate continuing change and uncertainty. The requirements and challenges in developing a reliable plan for improving conveyance through or around the Delta have exacerbated the physical, regulatory, and

economic uncertainties about the reasonably foreseeable future conditions thereby increasing the difficulty of assessing the potential benefits, impacts and costs of alternative plans. Consideration of these issues requires iterative refinement and reevaluation of alternatives but cannot be accomplished without a non-Federal cost share partner.

Proposed Actions for FY 2015: Funds would be used to support limited stakeholder coordination and public involvement.

Shasta Lake Water Resources Investigation

Authority: P.L. 96-375,1980

FY 2015 Budget Request (000's): $1,500

Project Description: Reclamation is continuing a Feasibility Study including preparation of a Feasibility Report/Decision Document and EIS for the Shasta Lake Water Resources Investigation (SLWRI). The purpose of the SLWRI is to determine the type and extent of Federal interest in a multiple purpose project to modify Shasta Dam and Reservoir to increase survival of anadromous fish populations in the upper Sacramento River; increase water supplies and water supply reliability to agricultural, municipal and industrial, and environmental purposes; and to the extent possible through meeting these objectives, include features to benefit other identified ecosystem, flood damage reduction, and related water resources needs.

Current Status: The Draft EIS was released in June 2013 to update agency decision makers and stakeholders on the potential effects of a final array of alternative plans and mitigation requirements. Each action alternative would contribute to CALFED program objectives to improve water supply reliability, ecosystem restoration, and water quality. Activities in FY 2014 include completing planning, engineering, environmental, economic, financial, and other studies needed to develop, process, and release the Final Feasibility Report and EIS in January 2015. Specific FY 2014 activities include updating the feasibility studies to reflect the current operating requirements governing the Central Valley and State Water Projects; updating and refining the analyses of potential physical and operational impacts; identifying mitigation requirements and cost estimates; updating benefits and costs; identifying a preferred alternative and recommended plan; continuing public involvement and outreach; and responding to comments.

Proposed Actions for FY 2015: Funds would be used to produce the Final Feasibility Report and Final EIS, conduct briefings and reviews within the Department of the Interior; draft the Record of Decision; continue public and stakeholder outreach; and prepare to transmit the reports to the Office of Management and Budget for potential Congressional review.

***San Luis Lowpoint Feasibility Study* (SLLPIP)**

Authority: P.L.108-361, Section 103(f) (1) (A), as amended by P.L. 113-76 to extend all Title I provisions from 2014 to 2015

FY 2015 Budget Request (000's*): *$1,500

Project Description: Reclamation is continuing a Feasibility Study in coordination with the Santa Clara Valley Water District (SCVWD) and other cooperating agencies for the SLLPIP. The purpose of the project is to determine the type and extent of Federal interest in a multiple purpose project to address water delivery reliability issues caused by algae blooms at low water levels, regulatory constraints to operating Delta export facilities, seismic risks under the dam and in the Delta, and the effects of future climate change.

Current Status: Reclamation completed a draft Appraisal Report documenting an evaluation of alternative dam expansion and corrective action concepts. The recommendations include combining multiple projects designed to improve the water supply delivery reliability associated with the physical and operational constraints of San Luis Reservoir for efficient and cost effective solutions. Reclamation is reformulating the alternatives for the SLLPIP to incorporate dam expansion and corrective action alternatives. Reclamation is updating the SLLPIP Plan of Study and Project Management Plan, and developing a cost sharing agreement with the State.

Proposed Actions for FY 2015: Funds would be used to conduct planning, engineering, environmental, economic, financial and related feasibility studies, and continue stakeholder coordination and public involvement and outreach.

Habitat Restoration

Suisun Marsh Protection

Authority: P.L. 99-546, 100 Stat. 3052, October 27, 1986

FY 2015 Budget Request (000's): $1, 253

Project Description: The Suisun Marsh Preservation Agreement (SMPA) was executed on March 2, 1987, among Reclamation, California Department of Water Resources, California Department of Fish and Game, and Suisun Resource Conservation District. The revised SMPA was executed on June 20, 2005, to reflect significant events and changed conditions that had occurred since the original SMPA was signed. The objective of the SMPA is to assure that a dependable water supply is maintained to mitigate the adverse effects on the Marsh from the Central Valley Project (CVP) and State Water Project (SWP) and a portion of the adverse effects of the other upstream diversions. Reclamation (CVP) is responsible for 40 percent of the construction and annual operation and maintenance costs associated with implementation of the SMPA; the State of California (SWP) is responsible for 60 percent of the implementation costs.

Current Status: The SMPA agencies propose to amend the Revised SMPA to establish a Preservation Agreement Improvement Fund that would provide a one-time amount of funding to support cost sharing for improvement of managed wetland facilities in lieu of constructing additional SMPA facilities described in the Suisun Marsh Plan of Protection, and finance activities currently funded under the Joint Use Facilities Fund under a single cost sharing mechanism.

The managed wetland facilities improvement element of the proposed fund would include a 75/25 cost share program providing funds for infrastructure improvements necessary to meet the 30-day flood and drain cycle described in individual management plans, potentially including purchase and installation of new, larger, lowered, or relocated discharge facilities.

The managed wetland facilities improvement element of the proposed fund would also include a 50/50 cost share program providing funds for management and infrastructure improvements necessary to meet recommendations described in the individual management plans to improve leaching and drainage efficiency. Eligible activities would include cleaning, widening and deepening primary and secondary ditches, adding v-ditches or drainage swales, raising elevations of pond bottom sinks, installation or improvement of interior water control structures, coring of interior levees, offsetting electrical and fuel costs for portable and stationary pumps during spring leaching periods, and fish screen electrical costs.

The Joint Use Facility Improvements element of the proposed fund would provide financing on a 75/25 cost share basis for infrastructure improvement to increase efficient and cooperative use of joint use water delivery systems to managed wetlands, including construction of or improvements to; interior levees, water conveyance ditches, water control structures, and permanent pumps. Funded activities would include newly constructed facilities or improvements to existing facilities.

Reclamation is also a principal participant with the other SMPA signatories and other interested agencies in developing a regional plan that balances implementation of the CALFED Program, SMPA and other management and restoration programs within Suisun Marsh in a manner responsive to the concerns of stakeholders and based upon voluntary participation by private landowners. The SMPA agencies, along with the U.S. Fish and Wildlife Service, completed an EIS/EIR for the Suisun Marsh Plan, which includes analysis of implementation of the proposed amendment to the Revised SMPA. A final draft of the EIS/EIR was released on December 6, 2011, and the proposed amendment to the revised SMPA will be implemented following completion of the environmental compliance documentation, including Endangered Species Act Consultations, and Record of Decision, anticipated in FY 2014.

Proposed Actions for FY 2015: Funding will continue Federal participation with the State of California to identify structural and nonstructural actions for the protection and preservation of Suisun Marsh to improve water quality, while preserving the CVP storage yield. Funding will support Reclamation's participation with the California Department of Water Resources to ensure dependable water supply of adequate quantity and quality to protect wildlife habitat in the Marsh for the protection and preservation of fish and wildlife, including continued funding of operation and maintenance costs of the SMPA facilities and the anticipated implementation of the proposed amendment to the revised SMPA upon finalization of the Suisun Marsh Plan decision documents.

Anadromous Fish Restoration Program

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (1)

FY 2015 Budget Request (000's): $11,379

Estimated Inter-agency Breakdown:

Agency	$000's
U.S. Bureau of Reclamation	$100
U.S. Fish and Wildlife Service	$11,279

Project Description: The objectives of the Anadromous Fish Restoration Program (AFRP) are to: (1) improve habitat for all life stages of anadromous fish through provision of flows of suitable quality, quantity, timing, and physical habitat; (2) improve survival rates by reducing or eliminating entrainment of juveniles at diversions; (3) improve the opportunity for adult fish to reach their spawning habitats in a timely manner; (4) collect fish population, health, and habitat data to facilitate evaluation of restoration actions; (5) integrate habitat restoration efforts with harvest and hatchery management; and (6) involve partners in the implementation and evaluation of restoration actions.

Current Status: The AFRP will continue to fund habitat restoration projects that improve habitat, survival, and passage of anadromous fish in Antelope Creek, Cow Creek, Cottonwood Creek, Deer Creek, Mill Creek, and the American, Consumnes, Merced, Stanislaus, and Yuba Rivers. The program will continue to collect fish population data for Cottonwood, Cow, Deer, and Mill creeks and in the Merced, San Joaquin, Stanislaus, and Yuba rivers to facilitate evaluation of restoration actions.

The AFRP has completed 23% of the 289 actions and evaluations in the Final Restoration Plan since the program was implemented. The average natural production estimate of Central Valley-wide Chinook salmon (spring, fall, late-fall, and winter run) in the period from 1992-2012, as calculated by Chinookprod is currently 398,585. The Chinook salmon natural production levels were robust during the early 2000's (692,921 in 2000; 594,727 in 2001, and 635,252 in 2002), but have experienced noticeable declines after 2005. The declines may be attributed to various factors, of which ocean conditions have been commonly implicated. The natural production levels have been slowly rebounding since 2010, and the past two years (183,713 in 2011 and 333,946 in 2012) have shown a moderate improvement. Central Valley-wide escapement for natural Chinook salmon (spring, fall, late-fall, and winter run) increased from the 2011 estimate of 133,990 to 221,760 in 2012. Also, the 2013 Chinook salmon fall-run returns to Central Valley-wide rivers and streams are expected to equal or surpass escapements observed during the mid-2000.

Proposed Actions for FY 2015: The AFRP will continue to make reasonable efforts to at least double natural production of anadromous fish. In pursuing this goal, AFRP will work with local watershed groups and other partners to implement watershed restoration plans, and to give first priority to actions, which protect and restore natural channel and riparian habitat values. The AFRP will focus on streams with the greatest potential to sustain natural production of fall-run, late fall-run winter-run, and spring-run Chinook salmon, and steelhead. The streams that support these species include the Sacramento, Yuba, Feather, American, and Stanislaus rivers, and Cottonwood, Cow, Mill, Deer, Battle, and Clear creeks. The highest priority will be to complete ongoing projects. Emphasis will be on improving access for spawning adults to upstream habitat, protecting and restoring riparian and shaded riverine aquatic habitat, improving access for juvenile fish to floodplain habitats, and reducing loss of juveniles along their rearing and migratory corridors. Fish screening and fish passage project planning and permitting will be a high priority. Furthermore, AFRP will collaborate and provide technical assistance to large-scale restoration efforts on the main-stem San Joaquin River and in the Delta.

Other CVP Impacts – Habitat Restoration Program

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (1) Other

FY 2015 Budget Request (000's): $1,700

Estimated Inter-agency Breakdown:

Agency	$000's
U.S. Bureau of Reclamation	$850
U.S. Fish and Wildlife Service	$850

Project Description: Protect and restore native habitats and species impacted by the Central Valley Project (CVP) that are not specifically addressed in the Fish and Wildlife Restoration activities section of the Central Valley Project Improvement Act (CVPIA). The focus is on habitats known to have experienced the greatest percentage decline in habitat quantity and quality since construction of the CVP, where such decline could be attributed to the CVP (based on direct and indirect loss of habitat from CVP facilities and use of CVP water). These include rare serpentine soil habitats, alkali scrub and grassland habitats, vernal pools, Central Valley wetlands, riverine dunes, and riparian habitat.

Current Status: To date, the program has directed $32.4 million to fund 120 conservation actions. These actions include habitat protection (fee title/conservation easement acquisition), habitat restoration, research, and captive propagation of Federally listed species. As of FY 2013, the program has contributed to the permanent protection of nearly 117,000 acres and the restoration of more than 8,000 acres of habitats for Federally listed species. The program has also funded over 70 research actions to date. It is anticipated that in FY 2014 the program will provide funding for protection and/or restoration of at least 2,000 acres of CVP impacted habitats.

Proposed Actions for FY 2015: Funding will be used for protection of habitats through purchase of fee title or conservation easements, and restoration of habitats for Federally listed species impacted by the CVP. The program will focus on protecting and restoring endangered serpentine soil habitats in Santa Clara County, vernal pool wetlands throughout the Central Valley, grassland and alkali scrub habitats in the San Joaquin Valley and Tulare Basin, and aquatic/riparian habitats throughout the Central Valley. Proposals for project funding will be solicited on www.grants.gov, with the selection of new projects each year being dependent on the most current species and habitat priorities identified by the U.S. Fish and Wildlife Service. It is anticipated that at least 50% of project funds will go toward land acquisition, with remaining funds being directed primarily to habitat restoration benefitting Federally listed species. The activities are required as part of the Programmatic Section 7 Consultation for CVPIA and other Biological Opinions related to CVP operations. All projects will focus on improving conditions for CVP impacted species.

Anadromous Fish Screen Program (AFSP)

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (21)

FY 2015 Budget Request (000's): $4,150

Estimated Inter-agency Breakdown:

Agency	$000's
U.S. Bureau of Reclamation	$3,796
U.S. Fish and Wildlife Service	$354

Project Description: The primary objective of the AFSP is to protect juvenile Chinook salmon (all runs), steelhead trout, and green and white sturgeon from entrainment at priority diversions in California's Central Valley including the Sacramento and San Joaquin Rivers, their tributaries, the Delta, and the Suisun Marsh. Section 3406 (b)(21) of the Central Valley Project Improvement Act requires the Secretary of the Interior to assist the State of California in developing and implementing measures to avoid losses of juvenile anadromous fish resulting from unscreened or inadequately screened diversions.

Current Status: AFSP funding has contributed to the completion of 41 fish screen projects in addition to planning activities for proposed fish screen projects involving feasibility studies, environmental compliance, permitting, and project design activities.

In FY 2013, the following activities were performed:

- Construction of the 389 cfs Natomas Mutual Sankey Diversion Fish Screen on the Sacramento River was completed. The project improves passage conditions for migratory fish species in the Sacramento River and Natomas Cross Canal (NCC) by relocating and replacing two unscreened NCC diversions with a new screened facility on the Sacramento River, and permanently removing a seasonal diversion dam on the NCC.
- Construction of fish screens on the Sacramento River were completed at: Alamo Farms (36 cfs), River Garden Farms #3 (62 cfs), Cranmore Farms #2 (40 cfs) and Tisdale #2 (44 cfs). Also a fish screen was constructed at Joe Sanchez Farms (24 cfs) on Steamboat Slough in the Sacramento-San Joaquin Delta.
- Continued construction of Yuba City's 74 cfs intake/fish screen project on the Feather River.
- Continued working on fish screen design, permitting, and environmental compliance activities for the following fish screens: RD 2035 (400 cfs), Meridian Farms Water Company (MFWC) Phase II (Meridian Diversion) (135 cfs), West Stanislaus Irrigation District (WSID) (347 cfs), and Natomas Mutual (Pritchard Lake) (160 cfs), Colusa Indian Community Council (Compton Diversion) (22 cfs), South Sutter Water District (Diversion #1) (80 cfs), and Feather Water District (North Diversion) (78 cfs) and Feather Water District (South Diversion) (40 cfs).
- Completed a final report (July 2013) documenting the results of a four-year fish entrainment monitoring program (2009-2012) at twelve diversions in the California Central Valley in partnership with the California Department of Fish and Wildlife and the Family Water Alliance (FWA). This effort included collection of fish loss data prior to installation of fish screens, in order to assess the biological benefits of fish screening and to help prioritize future fish screening efforts.

In FY 2014, the AFSP anticipates providing additional funding to RD 2035 for their fish screen project and to Natomas Mutual for their Pritchard Lake diversion fish screen. Also, completion of constructed fish screens are anticipated for: Yuba City, Colusa Indian Community Council (Compton Diversion), South Sutter Water District (Diversion #1), and Feather Water District (North

and South Diversions).

Proposed Actions for FY 2015: Funds are anticipated to be used for cost share funding for environmental compliance, design, construction, and monitoring activities for a number of fish screen projects. The selection of these projects will be made based on AFSP prioritization criteria which include: willing applicant, project costs, biological benefits, availability of Federal funding, and availability of the required non-Federal cost share. Also, a number of on-going AFSP projects are expected to seek construction funding including RD 2035, WSID and MFWC.

Water Acquisition Program (WAP)

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (3)-(d) (2)

FY 2015 Budget Request (000's): $24,655

Estimated Inter-agency Breakdown:

Agency	$000's
U.S. Bureau of Reclamation	$24,326
U.S. Fish and Wildlife Service	$329

Project Description: The two key objectives of the WAP are to:

(1) Provide supplemental water supplies for refuges, referred to as Incremental Level 4 (IL4), for critical wetland habitat supporting resident and migratory waterfowl, threatened and endangered species, and wetland dependent aquatic biota [CVPIA Sections 3406 (b)(3) and (d)(2)]. The WAP-Refuge (aka, Refuge Water Supply Program (RWSP) – Water Acquisitions Component) acquires this water from willing sellers.

(2) Acquire water to improve spawning and rearing habitat and increase migration in-stream flows for fall, winter and spring run Chinook salmon and steelhead in support of the Anadromous Fish Restoration Plan (AFRP) [CVPIA Section 3406 (b)(3)]. The WAP- Instream acquires water from willing sellers.

Current Status: In FY 2014 the WAP continues its efforts to; (1) Provide supplemental refuge water supplies (IL4) through annual purchases. As a supplement to surface water acquisitions the WAP – Refuge will continue to investigate and implement, as appropriate, groundwater projects in order to lower costs and increase reliability of providing supplemental refuge water supplies. Refuge water quality data will be collected and analyzed to assess the potential for long-term groundwater projects while providing short-term IL44 supplies; (2) Provide additional in-stream flows in support of the Central Valley wide fish doubling goal, as described in (b)(1). The WAP – In-stream intends to acquire Merced Irrigation District (MID) water to provide additional spring 2014 fishery pulse flows on the Merced and lower San Joaquin Rivers. The MID agreement expires December 31, 2013; however, efforts are underway for a new agreement. The State Water Resources Control Board is actively reviewing San Joaquin River flow objectives however, it is uncertain when those objectives would be adopted; and (3) Acquire water to enhance in-stream flows, thus improving spawning and rearing habitat for salmon and steelhead in support of the AFRP. The WAP – In-stream's acquisition of such water is subject to funding availability.

Proposed Actions for FY 2015: CVPIA required the acquisition of 100 percent of IL4 refuge water supplies, approximately 133,000 acre-feet (af), by 2002, for various wetland habitat areas within the Central Valley of California. However, the WAP-Refuge has not yet achieved this goal due to a variety of factors including water availability, water pricing, and funding. The WAP-Refuge acquires an average annually IL4 water supply of approximately 60,000 af; the actual amount acquired varies depending on the factors previously mentioned. Reclamation may acquire water supplies through short-term purchase agreements; purchase options, long-term water purchase agreements that require annual payments, and participation in groundwater banking. A large percentage of this water will be acquired within the San Joaquin Valley where most of the wetlands are located. Sources of water may include reservoir storage transfers, groundwater pumping, banked groundwater, and temporary or permanent transfers of surface supplies by water right holders or project contractors. Some water supplies may be transferred through the Delta, if excess pumping capacity at the CVP Jones Pumping Plant is available during July – September, for use on the San Joaquin Valley refuges. In addition to the water acquisition cost, there are delivery costs to get the water to the refuges, which are funded under the RWSP - Conveyance Component. In FY 2015, the WAP-Refuge expects to partner in the design and construction of Del Puerto Water District's and the Cities of Modesto and Turlock's proposed North Valley Regional Recycled Water Program (NVRRWP). The WAP-Refuge anticipates receiving, via the NVRRWP, a long-term (possibly 30-40 years), reliable IL4 water supply for San Joaquin Valley wildlife refuges. Although the potential to receive IL4 water from the NVRRWP looks promising at this time, there is some uncertainty regarding water quality issues (salt loading) as they relate to the Delta-Mendota Canal and lower San Joaquin River that need to be resolved.

The WAP – In-stream will acquire water to supplement the quantity of water dedicated under (b) (2) for fish, wildlife and habitat restoration purposes. Such water acquisitions will focus on in-stream flows to support the Central Valley wide fish doubling goal as described in (b)(1).

Dedicated Project Yield

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (2)

FY 2015 Budget Request (000's): $700

Estimated Inter-agency Breakdown:

Agency	$000's
U.S. Bureau of Reclamation	$175
U.S. Fish and Wildlife Service	$525

Project Description: The Department of the Interior has the responsibility to dedicate and manage annually 800,000 acre-feet of CVP water (b) (2) water for fish, wildlife, and habitat restoration purposes and assist the State of California in its efforts to protect the waters of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. The program objectives are to: (1) improve habitat conditions for anadromous fish in CVP controlled rivers and streams and the Bay-Delta to help meet the AFRP doubling goals; (2) increase survival of out migrant juvenile anadromous fish, especially in the Bay-Delta; (3) enhance recovery of listed threatened and endangered fish species; and (4) monitor and evaluate to assess the effectiveness of (b) (2) measures.

Current Status: The May 2003 Decision on Implementation of Section 3406(b) (2), clarified as necessary court decisions, will be implemented for the twelfth year in 2014, upstream actions will be implemented; and monitoring and evaluation to assess the effectiveness of (b) (2) environmental measures will continue.

Proposed Actions for FY 2015: Funding will be used to continue efforts associated with the annual dedication and management of 800,000 acre-feet of CVP yield for the primary purpose of anadromous fish restoration as directed by the CVPIA. The May 2003 Decision on Implementation of Section 3406(b) (2), will be implemented for the thirteenth year in 2015; upstream actions will be implemented; and monitoring and evaluation to assess the effectiveness of (b) (2) environmental measures will continue.

Clear Creek Restoration

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (12)

FY 2015 Budget Request (000's): $1,080

Estimated Inter-agency Breakdown:

Agency	$000's
U.S. Bureau of Reclamation	$390
U.S. Fish and Wildlife Service	$690

Project Description: The purpose of the Clear Creek Restoration Program is to: (1) restore stream channel form and function necessary to optimize habitat for salmon and steelhead and the aquatic and terrestrial communities on which they depend; (2) determine long-term flow needs for spawning, incubation and rearing by conducting an In-stream Flow Incremental Methodology study as mandated in Section 3406 (b)(12); (3) provide flows of adequate quality and quantity to meet the requirements of all life stages of Chinook salmon and steelhead trout known to use Clear Creek; (4) provide spawning gravel to replace the natural supply of gravel that is blocked by Whiskeytown Dam; and (5) monitor project results.

Current Status: In FY 2014, Clear Creek restoration will focus on providing flows, the planning and design of restoration projects focusing on stream channel and in-stream habitat, and conduct monitoring to determine impacts of restoration actions.

Releases from Whiskeytown Dam will provide downstream fish habitat that is at least 90 percent of the maximum possible weighted usable area, will allow water temperatures to comply with the National Marine Fisheries Service's biological opinion, and allow passage of adult anadromous fish at the former McCormick-Saeltzer Dam location. Design and permitting will be completed on the Lower Clear Creek Aquatic Habitat and Mercury Abatement Project that will use abandoned dredger mine tailings as an inexpensive source of spawning gravel for future placements. Another on-going effort is to prepare long-term programmatic environmental permits to support various future restoration actions in Clear Creek. Environmental compliance planning will continue for the Environmental Water Program's "geomorphic/channel maintenance flows". Monitoring activities will include work to ascertain impacts of restoration actions on fishery and geomorphic resources and determine the amount of spawning gravel needed to maximize the amount of spawning habitat.

Proposed Actions for FY 2015: Clear Creek restoration will continue to aggressively implement Chinook salmon and steelhead habitat enhancement projects through partnerships with local landowners, public and private agencies, and universities. Projects are currently emphasizing restoration actions that will increase populations of spring-run Chinook salmon and steelhead, both listed as threatened under the Federal Endangered Species Act. Restoration activities will focus on implementing the Lower Clear Creek Aquatic Habitat and Mercury Abatement Project. The program will continue monitoring juvenile habitat use, spawning area mapping, juvenile habitat suitability indices, gravel quality, survival-to-emergence, fish rescue, benthic macro invertebrate sampling, and water quality and water temperature. The program will also implement several in-stream spawning gravel placement projects. In addition, the Environmental Water Program is scheduled to implement its first "geomorphic/channel maintenance flows" discharge of 3,250 cfs, which will help promote proper functioning of more natural fluvial geomorphic processes in Clear Creek.

Spawning Gravel/Riparian Habitat

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (13)

FY 2015 Budget Request (000's): $1, 690

Estimated Inter-agency Breakdown:

Agency	$000's
U.S. Bureau of Reclamation	$1,599
U.S. Fish and Wildlife Service	$91

Project Description: The purpose of the Spawning Gravel/Riparian Habitat Program is to increase the availability of spawning gravel and rearing habitat, and subsequently monitor the results of these actions, for: (1) Sacramento River Basin Chinook salmon and steelhead trout in the reach of the mainstem Upper Sacramento River from Keswick Dam downriver to Red Bluff Diversion Dam; (2) American River Basin Chinook salmon and steelhead trout in the reach of the American River downriver from Nimbus Dam; and (3) Stanislaus River Chinook salmon and steelhead trout in the reach of the Stanislaus River downriver from Goodwin Dam.

Current Status: Gravel placement occurs annually in the upper Sacramento River downstream from Keswick Dam. Gravel is replenished at existing augmentation sites as the placed gravel is washed downstream. New placement sites are being scoped and new projects addressing rearing and spawning habitat limitations are being pursued. Monitoring of past projects is ongoing and a sediment budget is being developed.

The American River gravel placement program has identified specific project sites as part of a multi-year series of projects, beginning in 2008, between Nimbus Dam and River Bend Park to address spawning habitat and rearing habitat limitations. Projects have been completed at six sites. Projects include gravel placement, side channel creation, woody material additions, and vegetative enhancements for spawning and rearing habitat targeting steelhead and Chinook salmon. Evaluating the effectiveness of past projects is ongoing.

The Stanislaus River program has identified rearing habitat as a key limitation to Chinook salmon so projects will target gravel placement to enhance rearing and spawning habitat. The National Oceanic

and Atmospheric Administration Reasonable and Prudent Alternative for operations of the CVP and SWP included an action to place 50,000 cubic yards of gravel in the Stanislaus by 2014 and 8,000 cubic yards per year thereafter (for steelhead). Stanislaus projects are striving to meet this action. Evaluating the effectiveness of past projects is ongoing.

Proposed Actions for FY 2015: Funding will be used for gravel restoration and rearing habitat projects on the Upper Sacramento, American, and Stanislaus rivers immediately downstream from Keswick, Nimbus, and Goodwin dams, respectively. Species to benefit include Sacramento, American and Stanislaus River Basin Chinook salmon and steelhead trout. The public involvement and permitting phases of project planning will determine final site selection in all three rivers. Monitoring will be incorporated into all projects to determine the effectiveness of projects at maintaining and enhancing salmonid habitat. Specific gravel placement activities each year are dependent on watershed hydrology which sporadically modifies in-stream habitat.

Bay-Delta Conservation Plan (BDCP)

Authority: P.L. 85-624, Fish and Wildlife Coordination Act

FY 2015 Budget Request (000's): $4,000

Project Description: The BDCP is a Habitat Conservation Plan and Natural Communities Conservation Plan being prepared to meet the requirements of the Federal Endangered Species Act (ESA), California Endangered Species Act, and Natural Communities Conservation Planning Act for Central Valley Project (CVP) / State Water Project (SWP) water operations and management activities in the Delta. The BDCP will serve as the basis for incidental take permit applications for a new water conveyance facility around and/or through the Sacramento-San Joaquin River Delta, along with habitat restoration, under Section 10 of the ESA. Also, the information developed as part of the BDCP process will help inform the ESA Section 7 consultation on the coordinated long-term operation of the CVP and SWP. The section 10 permit issuance decisions and the associated Federal actions which may be undertaken by Reclamation are major Federal actions that require preparation of an Environmental Impact Statement (EIS) under the National Environmental Policy Act. Lead agencies for the EIS are Reclamation, the U.S. Fish and Wildlife Service (FWS), and the National Marine Fisheries Service (NMFS).

The BDCP also will serve as the planning and permitting document under State law for the new conveyance facility, operations, and habitat restoration, and a take permit for these activities under California's Natural Community Conservation Planning Act administered by the California Department of Fish and Game. The California Environmental Quality Act requires the preparation of an Environmental Impact Report (EIR) for the BDCP. The lead agency for the EIR is the California Department of Water Resources.

Current Status: The Draft BDCP and associated Draft EIR/EIS were posted on the BDCP website (http://baydeltaconservationplan.com/Home.aspx) December 9, 2013, with formal public comment from December 13, 2013 through April 14, 2014. During the formal comment period there will be twelve public meetings that will take place throughout the State in January and February of 2014. These meetings will provide information about the project and accept formal comments. Comments accepted during the official comment period will be considered in the development of the Final

BDCP and Final EIR/EIS. The Draft BDCP EIR/EIS includes 15 alternatives plus a No Action Alternative.

Proposed Actions for FY 2015: Funding will be used to continue activities associated with BDCP legal and permitting requirements. The requirements include compliance with the Endangered Species Act (ESA), National Environmental Policy Act (NEPA), Clean Water Act, and National Historic Preservation Act. Other activities include development of value engineering studies, Fish Facility Technical Team studies, modeling, and a Design, Estimating and Construction (DEC) review of the proposed pumping and conveyance facilities.

Red Bluff Pumping Plant and Fish Passage

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (10)

FY 2015 Budget Request (000's): $849

Project Description: The Red Bluff Diversion Dam is in the Sacramento River Division of the CVP. It was identified as an impediment to upstream and downstream passage of salmonid species, as well as the green sturgeon. Reclamation completed a final EIS/EIR and signed a Record of Decision on July 16, 2008, to construct a screened pumping plant on the mainstem Sacramento River to replace the function of the diversion dam. The pumping plant will be capable of diverting the full capacity of the Tehama Colusa Canal with a build out capacity of 2,500 cfs to maintain irrigation diversions without lowering the Diversion Dam gates.

Current Status: The primary construction contracts are complete with the new Fish Screen and Pumping Plant operating, delivering water to the Tehama-Colusa and Corning Canals. Terrestrial Mitigation is in the plant establishment phase, which will continue through to October 2017. The Decommissioning Contract has been awarded with construction to begin in January 2014. The Hydraulic Performance Verification and Biological Monitoring began in 2013 and extended through 2014.

Proposed Actions for FY 2015: Funds will be used for decommissioning the existing dam, construction support, mitigation and for continued biological monitoring that is mandated by the June 4, 2009 Biological Opinion (BiOp) for the long-term operation of the CVP. New fish screen performance evaluation will begin, including hydraulic and biological performance. These evaluation activities are required by the BiOp addressing construction of the new pumping plant. Also, the Dam Decommissioning Contract may continue through first quarter of 2015.

San Joaquin River Restoration Program (SJRRP)/San Joaquin River Basin Management

Authority*:* San Joaquin River Restoration Settlement Act, Title X, P.L. 111-11, and Title XXXIV, P.L. 102-575, Section 3406 (c)

FY 2015 Budget Request (000's): $34,000

	$000's
SJRP Discretionary	$32,000
CVP Restoration Fund- Discretionary	$2,000

Project Description: In 1988, a coalition of environmental groups, led by the Natural Resources Defense Council (NRDC), filed a lawsuit challenging the renewal of the long-term water service contracts between the United States and the Central Valley Project, Friant Division contractors. After more than 18 years of litigation of this lawsuit, known as NRDC et al. v. Kirk Rodgers, et al., a Settlement was reached. On September 13, 2006, the Settling Parties agreed on the terms and conditions of the Settlement, which was subsequently approved by the U.S. Eastern District Court of California on October 23, 2006. The Settlement establishes two primary goals:

- To restore and maintain fish populations in "good condition" in the main stem of the San Joaquin River below Friant Dam to the confluence of the Merced River, including naturally reproducing and self-sustaining populations of salmon and other fish (Restoration Goal); and
- To reduce or avoid adverse water supply impacts to all of the Friant Division long-term contractors that may result from the Interim Flows and Restoration Flows provided for in the Settlement (Water Management Goal).

The Settlement calls for a variety of physical improvements within and near the San Joaquin River, within the Friant-Kern and Madera canals, and within the service areas of the Friant Division long-term contractors to achieve the Restoration and Water Management goals. The San Joaquin River Restoration Settlement Act (Act), included in the Omnibus Public Land Management Act of 2009, was signed by the President on March 30, 2009 and became Public Law 111-11. The Act authorizes and directs the Secretary of the Interior to implement the Settlement. The San Joaquin River Restoration Program (SJRRP) will implement the Settlement consistent with the Act.

Current Status: Reclamation has been working with the other Settling Parties, the State of California, affected Third Parties, and other Federal agencies to conduct the environmental review, planning, and initial design activities to implement the Settlement and the Act. Actions in progress or that will be initiated in FY 2014 include the following:

- Administration and Program Management – Continued program management actions, including providing funding for the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to participate in the SJRRP.
- Mendota Pool Bypass and Reach 2B Improvements Project – Completion and release of the Draft Environmental Impact Statement (EIS) for the Mendota Pool Bypass and Reach 2B Channel Improvements Project and continuing engineering design activities in preparation for construction beginning in late calendar year 2015 or 2016. This project implements two of the highest priority projects identified in the Settlement. This project includes expanding the channel capacity of 11 miles of the San Joaquin River from the Chowchilla Bifurcation Structure to near Mendota Pool (known as Reach 2B) to convey at least 4,500 cubic feet per second and to provide floodplain and riparian habitat for rearing juvenile salmon. The project also includes the creation of a bypass channel around Mendota Pool to prevent fish entrainment in the water diversion facilities in the pool. The bypass channel will be designed and constructed in a way that allows for the Secretary of the Interior to make deliveries of San Joaquin River water to the Mendota Pool, when

necessary. The Mendota Pool is a key point for irrigation water distribution on the San Joaquin Valley. In FY 2014, Reclamation anticipates completing the Draft EIS and key permitting actions, beginning the land acquisition efforts, and funding some design activities to the extent that funding is available.

- Reach 4B, Eastside Bypass and Mariposa Bypass Channel and Structural Improvements Project – Continued efforts on the Reach 4B, Eastside and Mariposa Bypass Channel and Structural Improvements Project, including continued planning, environmental compliance, and design efforts. In FY 2014, Reclamation anticipates awarding a contract to complete the environmental compliance and permitting aspects of this project along with the report required in Section 10009(f)(2) of P.L. 111-11. This project implements five of the highest priority projects identified in the Settlement.
- Arroyo Canal Fish Screen and Sack Dam Fish Passage Project – Continue subsidence monitoring, and additional environmental compliance and design efforts for the Arroyo Canal Fish Passage and Sack Dam Fish Passage Project. The project implements two of the highest priority projects identified in the Settlement. The project includes a fish screen on the Arroyo Canal to prevent entrainment of juvenile Chinook salmon in the canal and modifications to Sack Dam to allow for fish passage around the structure. Arroyo Canal and Sack Dam are owned and operated by Henry Miller Reclamation District #2131. The dam and canal are the sole diversion and conveyance facilities for the District which provides water to approximately 47,000 acres of highly productive agricultural lands in the San Joaquin Valley, along with moving water to Federal and State wildlife refuges and private duck clubs. This project was originally planned for construction in FY 2013, but has been delayed due to the need to further explore recent changes in conditions at the site due to ground subsidence and adjust the design accordingly.
- Fisheries Reintroduction Activities – Continued fish reintroduction actions including continued migration and survival studies, adult passage studies, tagging and recovery of previous years' tagged fish, trapping and hauling of adult salmon around passage barriers, spring-run broodstock development, and peer review and adaptive management actions. The actual study activities are further defined in the SJRRP's Monitoring and Analysis Plan which is updated annually and available on the SJRRP's website at www.restoresjr.net. In addition, and if all permits and approvals are obtained in time, the SJRRP anticipates beginning reintroduction of spring-run Chinook salmon with the first release of spring-run into the river in spring 2014. Reclamation also anticipates providing funding to the California Department of Fish and Wildlife for the continued operations and maintenance at the San Joaquin River Salmon Conservation and Research Hatchery.
- Flow Related Activities – Begin release of long-term flows (termed Restoration Flows) from Friant Dam. Continued implementation of a comprehensive groundwater seepage management and monitoring program including implementation of seepage management actions and projects to reduce or avoid high groundwater elevations under adjacent agricultural lands that may affect agricultural productivity as a result of release of Restoration Flows from Friant Dam consistent with the Settlement and P.L. 111-11. Continued implementation of actions to improve levee stability and allow for higher Restoration Flow releases over time. Continued implementation of mitigation measures to address impacts of the Restoration Flows, including continued implementation of a biological conservation strategy to address impacts to biological resources and realty and easement acquisition to address impacts to low-lying lands, as outlined in the Program's

environmental documents.

- Paragraph 16 Activities, Restoration Flow Guidelines, and Recovered Water Account – Continued monitoring and facilitation of water recapture and recirculation opportunities consistent with Paragraph 16 of the Settlement and management of the Recovered Water Account.
- Friant-Kern and Madera Canal Capacity Restoration Projects – Begin construction activities for the Friant-Kern Canal Capacity Correction Project and the Madera Canal Capacity Correction Project. These two projects would restore the capacity of the Friant-Kern and Madera canals to the previous design and construction capacity, thereby providing additional capacity for the Friant Division long-term contractors to make better use of water supplies and reduce or avoid impacts that would otherwise occur with the implementation of the Settlement.
- Part III, Financial Assistance for Local Groundwater Banks – Staff time to continue to administer financial assistance agreements awarded in previous years for local groundwater banking projects intended to reduce, avoid, or offset the water supply impacts to the Friant Division long-term contractors caused by the Restoration Flow releases that would occur under the Settlement.

Proposed Actions for FY 2015: The SJRRP will continue planning, engineering, environmental compliance, fishery management, water operations, and public involvement activities related to the Restoration and Water Management goals in the Settlement. Significant actions planned for implementation in FY 2015 include the following:

- Administration and Program Management – Program management actions, including providing funds for the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to participate in the SJRRP.
- Mendota Pool Bypass and Reach 2B Improvements Project – Completion and release of the Final EIS, and Record of Decision for the Mendota Pool Bypass and Reach 2B Channel Improvements Project. Completion of final design and land acquisition actions for the Mendota Pool Bypass component of the project. This will allow the Mendota Pool Bypass component of this project to stay on schedule for beginning construction actions in FY 2016. The Mendota Pool Bypass component of this project implements one of the highest priority projects identified in the Settlement and includes the creation of a bypass channel around Mendota Pool to prevent fish entrainment in the water diversion facilities in the pool.
- Reach 4B, Eastside Bypass and Mariposa Bypass Channel and Structural Improvements Project – Continue to manage and direct efforts on the Reach 4B, Eastside and Mariposa Bypass Channel and Structural Improvements Project, including continued planning, environmental compliance, and design efforts. Completion and release of the Draft EIS for this project. This project implements five of the highest priority projects identified in the Settlement.
- Arroyo Canal Fish Screen and Sack Dam Fish Passage Project – Continue subsidence monitoring and complete additional environmental compliance and final design efforts. This project is anticipated to be ready to construct in FY 2016.
- Fisheries Reintroduction Activities – Fish reintroduction actions planned for FY 2015 include continued collection of broodstock and transporting those fish to the Program's

Salmon Conservation and Research Facility, operations and maintenance of the Salmon Conservation and Research Facility, continued reintroduction of spring-run Chinook salmon with the release of juvenile spring-run into the San Joaquin River, monitoring source streams for future collection of wild stocks, and trapping and hauling of adult salmon around passage barriers.

- Flow Related Activities – Continued release of Restoration Flows and implementation of the SJRRP's comprehensive groundwater seepage management and monitoring program including implementation of seepage management actions and projects to reduce or avoid high groundwater elevations under adjacent agricultural lands that may affect agricultural productivity as a result of release of long-term flows from Friant Dam. Continued implementation of actions to improve levee stability and allow for higher Restoration Flow releases over time. Continued implementation of mitigation measures to address impacts of the Program's long-term Restoration Flows, including realty and easement acquisition to address impacts to low-lying lands, as outlined in the Program's environmental documents. Request includes funds to continue to fund staff to oversee and continue to lead efforts by contractors that were funded in previous years and funding for construction of seepage management actions.
- Paragraph 16 Activities, Restoration Flow Guidelines, and Recovered Water Account – Staff time to continue to monitor and facilitate water recapture and recirculation opportunities consistent with Paragraph 16 of the Settlement and to manage the Recovered Water Account.
- Friant-Kern and Madera Canal Capacity Restoration Projects – Continued construction activities for the Friant-Kern and Madera Canal Capacity Restoration projects. These two projects would restore the capacity of the Friant-Kern Canal and Madera Canal to the previous design and construction capacity, thereby providing additional capacity for the Friant Division long-term contractors to make better use of water supplies and reduce or avoid impacts that would otherwise occur with the implementation of the Settlement.
- Part III, Financial Assistance for Local Groundwater Banks – Staff time to continue to administer financial assistance agreements awarded in previous years for local groundwater banking projects intended to reduce, avoid, or offset the water supply impacts to the Friant Division long-term contractors caused by Restoration Flows. Award $2,700,000 to fully fund the financial assistance agreements with Pixley Irrigation District and Tulare Irrigation District that were awarded in FY 2013.

Comprehensive Assessment and Monitoring Program

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (16)

FY 2015 Budget Request (000's): $2,306

Estimated Inter-agency Breakdown:

Agency	$000's
U.S. Bureau of Reclamation	$483
U.S. Fish and Wildlife Service	$1,823

Project Description: The Comprehensive Assessment and Monitoring Program (CAMP) is intended as the vehicle for comprehensively assessing the effects of all CVPIA restoration actions under Section 3406(b). The program has two objectives: (1) assess the overall (cumulative) effectiveness of actions implemented under CVPIA Section 3406(b); and (2) assess the relative effectiveness of categories of actions under CVPIA Section 3406(b). This will be primarily a data compilation and assessment effort, using ongoing project-specific and general monitoring to assess the progress of 3406(b) actions.

Current Status: CAMP will continue efforts to monitor and evaluate the progress of CVPIA implementation actions as well as the progress toward achieving the anadromous fish doubling goals. This information will inform adaptive management actions for the CVPIA anadromous fish restoration efforts.

The CAMP is continuing to revise the program's future scope, direction, and costs. The results will be included in a programmatic document that updates the 1997 CAMP Implementation Plan and supports the Structured Decision Making effort underway for fisheries. The CAMP is currently working with entities that collect data summarized in CAMP reports to: (1) clarify how data have historically been collected; (2) provide templates for reporting data, analyses, and results to CAMP; and (3) provide more robust data collection techniques that describe the accuracy and precision of data that are collected. Additionally, the Program is: (1) assessing current data being collected by all CVPIA programs; (2) conducting management and program manager meetings to determine data needs for decision making; (3) coordinating data management activities with other Federal and State agencies and other organizations; (4) conducting data management training; and (5) developing short-term and long-term data management plans.

Proposed Actions for FY 2015: CAMP will continue efforts to monitor and evaluate the progress of CVPIA implementation actions as well as the progress toward achieving the anadromous fish doubling goals. Utilization of this information will inform the adaptive management process for CVPIA anadromous fish restoration efforts. The Fish and Wildlife Service will prepare an Annual Report documenting the status of anadromous fish toward the doubling goal described in Section 3406(b)(1); continue tracking CVPIA programmatic and project specific monitoring efforts; identify future monitoring priorities; and synthesizing data into usable reports. As a result of assessing future priorities, CAMP will fund a limited number of high priority monitoring projects necessary to develop the Annual Report. CAMP will continue to implement the CVPIA Data Management Plan, maintain and update the annual accomplishments tables, maintain and update the annual work plan tables, assist in the development of the CVPIA annual accomplishments report, assess current data being collected by all CVPIA programs, coordinate data management activities with other Federal and State agencies, and assist in the planning and development of the Science Based Management Framework.

Tracy (Jones) Pumping Plant Mitigation Program

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (4)

FY 2015 Budget Request (000's): $1,236

Project Description: This activity identifies and implements physical improvements and

operational changes assessing fishery conditions, and assessing salvage operations at the Tracy Fish Collecting Facility (TFCF) per the Central Valley Project Improvement Act and Coordinated Long-Term Operation of the CVP/SWP Biological Opinions.

Current Status: Research and operation assessment efforts continue in order to better understand current operating performance of the TFCF, and to implement physical and operational changes in order to improve overall fish salvage capabilities. This is consistent with current CALFED South Delta Fish Facility Forum recommendations and Coordinated Long-Term Operation of the CVP/SWP Biological Opinions. Some improvements have been implemented and many others are planned through FY 2015 and beyond.

Proposed Actions for FY 2015: Proposed actions include continuation of TFCF operational assessment for salmon and steelhead, assessing effects of loading density and transport water volume on survival of the Sacramento-San Joaquin Delta fish species, and evaluation of vegetative debris removal techniques within the holding tanks. Actions also include working on field data collected as a result of TFCF operational assessment for use of Carbon Dioxide as an alternative predator removal technique and design and evaluation of an electric fish crowder. The first report of early electric crowder testing results is due. The largest field effort will be the (year one) Whole Facility Evaluation of fish losses. Other anticipated actions include design engineering work on the Primary Channel Improvements as well as publishing the completed Tracy Research Volume Series, splittail and sturgeon efficiency, evaluations of the abundance of large striped bass predators in the primary channel of the TFCF, and effects of fish density on water quality in the new haul out buckets, and maintenance of the Tracy Research website.

Yolo Bypass Implementation

Authority: P.L. 57-161, Reclamation Act of 1902, P.L. 75-392, Rivers and Harbor Act of 1937

FY 2015 Budget Request (000's): $2,788

Project Description: The NMFS Biological and Conference Opinion on the Long-Term Operation of the CVP and SWP included reasonable and prudent alternative (RPA) actions associated with the Yolo Bypass to avoid jeopardizing species and adverse modification of designated and proposed critical habitat. In response, Reclamation and Department of Water Resources (DWR) jointly prepared the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Implementation Plan (Implementation Plan) to address two specific RPA actions associated with restoration of floodplain rearing habitat (RPA Action I.6.1) and fish passage (RPA Action I.7). The Implementation Plan describes the objectives and performance measures for these actions, potential actions for further evaluation, the process and timeline for implementation, and some proposed refinements. The Implementation Plan is available on Reclamation's website at http://www.usbr.gov/mp/BayDeltaOffice/Documents/yolo.html.

In addition, Reclamation and DWR are initiating a detailed planning and environmental compliance process to further implementation of the above RPA actions. This multi-disciplinary effort will include preparation of an environmental impact statement/environmental impact report in accordance with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA); technical studies consisting of planning, environmental, economics, and engineering reports

to support selection of a preferred alternative; a biological assessment in accordance with the Endangered Species Act; and other documentation as necessary to support required permitting and environmental compliance processes. The project includes stakeholder involvement including meetings and on-going communication with the Yolo Bypass Fisheries Enhancement Planning Team and partnering agencies and local government representatives.

Current Status: A contract was awarded in 2012 to commence the planning and environmental compliance process including preparation of an environmental impact statement/environmental impact report in accordance with NEPA and CEQA; technical studies consisting of planning, environmental, economics, engineering reports to support selection of a preferred alternative; a biological assessment in accordance with the Endangered Species Act; and other documentation as necessary to support required permitting and environmental compliance. A Notice of Intent/Notice of Preparation to initiate the NEPA/CEQA scoping process was issued in March 2013, and the alternatives development process is underway. The NEPA/CEQA process is estimated to be completed in 2017.

Proposed Actions for FY 2015: Continue work on planning and environmental compliance process as well as ongoing stakeholder involvement.

Interagency Ecological Program (IEP)

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (1).

FY 2015 Budget Request (000's): $6,488

Project Description: The IEP is a consortium of six Federal and three State agencies that conducts physical, chemical, and biological monitoring in the Sacramento-San Joaquin Delta and San Francisco Bay as required by the joint Federal-State water right permit that allows the CVP/SWP to export water from the Delta (D-1641) and by biological opinions issued by the FWS and the NMFS under the Endangered Species Act of 1973, which regulate CVP/SWP project operations. Collectively, these monitoring activities constitute the IEP Core Program. The resulting data sets are posted on line and accessible via the IEP website http://www.water.ca.gov/iep. The IEP also coordinates applied research on Delta hydrodynamics, sediment transport, nutrient cycling, primary production, invertebrate production and fish community structure. Funding for the University of California-Davis Delta Smelt Culture Facility is also coordinated through the IEP. The IEP conducts an annual workshop each spring.

Current Status: The IEP continues to serve as the principal source of physical, chemical and biological data that are essential to effective management and operation of the CVP. The data and resulting information are also used for the Bay Delta Conservation Plan and other planning efforts for future projects involving Reclamation and its partners.

Proposed Actions for FY 2015: Funding will be used to continue mandated monitoring activities. These activities include the operation of continuous tidal flow, turbidity and thermograph stations, the Environmental Monitoring Program, upper estuary phytoplankton and zooplankton sampling, the fall midwater trawl and summer townet surveys, estuarine and Bay shrimp monitoring, Delta

juvenile salmon monitoring, the Spring Kodiak trawl, larval fish and 20mm delta smelt surveys and screw trap monitoring for juvenile salmonids in the Sacramento River at Knights Landing.

CALFED Science Activities Pelagic Organism Decline (POD)

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (1).

FY 2015 Budget Request (000's): $5,350

Project Description: Investigation of the causes and consequences of the recent declines in the relative abundance of pelagic organisms in the Bay-Delta, including the delta smelt, a species listed as threatened under the Endangered Species Act. Expert evaluations and scientific assessments and assistance in other agencies' efforts to establish performance measures and to monitor and evaluate the performance of all CALFED Program elements will continue.

Current Status: Indices of relative abundance of four species of pelagic fishes in the Sacramento-San Joaquin Estuary, including the ESA-listed delta smelt, continue to be at or near record lows and there is a growing consensus that the Delta has undergone a 'regime shift' due in part to project operations, decreasing turbidity and the proliferation of exotic aquatic vegetation. The conceptual models underlying Delta science activities have thus been modified to reflect this new understanding.

Proposed Actions for FY 2015: Activities will continue to implement recommendations from the POD Synthesis Report and the Synthesis of Studies in the Fall Low-Salinity Zone of the San Francisco Estuary, September-December 2011 document to be published as a U.S. Geological Survey Report. These activities will include follow-up work identified in the synthesis reports, and development and implementation of adaptive management experiments. Tasks will include field monitoring, laboratory evaluations, special studies, statistical evaluations, mathematical model construction, hydrodynamic and particle tracking modeling and program administration. Principal investigators will continue to publish their findings in peer-reviewed journals.

Federal Science Task Force Studies

Authority: Title XXXIV, P.L. 102-575, Section 3406 (b) (4).

FY 2015 Budget Request (000's): $5,700

Project Description: The Task Force was established by the Federal Bay-Delta Leadership Committee to develop and implement a Near-Term Science Strategy and an Integrated Biological Opinion that would address the Bay Delta Conservation Plan (BDCP) and related operations of the Federal Central Valley Project (CVP) and California's State Water Project (SWP). The Task Force was formed in May 2010 with staff from the Bureau of Reclamation (Reclamation), U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS) and U.S. Geological Survey (USGS). The Task Force prepared two documents: the "Near-Term Science Strategy" and the "Integrated BDCP BiOp Strategy". The first document identifies an initial list of near-term scientific research issues arising from the National Academy of Sciences report entitled, "A Scientific Assessment of Alternatives for Reducing Water Management Effects on Threatened and Endangered Fishes in California's Bay Delta" (NAS Report). The second document identifies analytical methods

and modeling tools, responsibilities, integration of independent peer review, and critical science gaps that need to be addressed.

Current Status: The Task Force is funding a number of studies to address recommendations from the NAS Report and to facilitate development of an integrated biological opinion. These studies include: (1) development of full-life cycle models for Central Valley Chinook salmon (NMFS); (2) an assessment of juvenile Chinook salmon predation near large water intakes along the Sacramento River; (3) a multi-year effort to determine steelhead smolt survival and migration pathways in the San Joaquin River and south Delta; (4) an analysis of a large (2.5 million observations) acoustic tagging data for Chinook salmon emigrating from the Sacramento River for use in developing a quantitative model to predict the impacts of management actions on salmon survival; and (5) a multi-year effort to determine the potential for managing the turbidity field as a way to reduce entrainment of delta smelt into CVP/SWP export facilities.

Proposed Actions for FY 2015: Actions proposed for FY 2015 include: (1) application of Chinook salmon life cycle model to CVP operation and habitat restoration scenarios in support of BDCP effects analysis, biological assessments and integrated biological opinion development; (2) continuation of steelhead smolt survival studies and model development for the San Joaquin River-South Delta; and (3) a determination of the feasibility of manipulating the turbidity field of the Delta to control delta smelt movement through the Delta; and (4) adaptive management experiment to manipulate food production in the North Delta to benefit delta smelt production.

Drainage Management Program

Authority: P.L. 86-488, San Luis Unit, Central Valley Project

FY 2015 Budget Request (000's): $11,727

***Project Description*:** The Record of Decision (ROD) for the San Luis Drainage Feature Re-evaluation on Reclamation's efforts to develop a solution to address outstanding Federal drainage obligations under the 1960 San Luis Act, including efforts outlined in the Plan of Action for Drainage to the San Luis Unit (SLU) submitted to the District Court in April 2001, in compliance with the Court's order, was completed in 2007. The Grassland Bypass Project (GBP) results in annual reductions in discharge of salts, selenium, and other constituents to the San Joaquin River and a ROD for those efforts was executed in 2009.

***Current Status*:** In accordance with the Court Order, Reclamation is implementing drainage service consistent with the 2007 ROD and the Courts November 4, 2011 Revised Control Schedule which provides for implementation of SLU drainage service in the Central subunit of Westland's-Central instead of the North subunit of Westland's-North, as Reclamation originally presented to the Court in 2009. On October 8, 2013 Westland's filed a motion with the Court seeking an Order that would allow Reclamation to suspend activities under the Revised Control Schedule for six months, except for activities relating to the Demonstration Treatment Plant (currently under construction in the Northerly SLU) so that Westland's and Reclamation can continue discussions regarding a potential settlement of claims related to drainage of the lands within Westland's. On October 28, 2013, the Department of Justice

filed a response to Westland's motion that in general did not oppose Westland's motion provided that the parties agree and/or the Court confirms that during the suspension, Reclamation may redirect appropriations directed at the drainage program to "other high priority activities". On November 13, 2013, the Court granted Westland's motion with the Order to temporarily suspend Reclamation's drainage activities within Westland's, and provided that Reclamation may, consistent with applicable law, redirect appropriations designated for drainage activities within Westland's to other high priority activities.

Reclamation has been providing drainage service to the northerly portion of the SLU since 1996 with the GBP. The FY 2014 budget continues Reclamation's participation in the GBP which prevents discharge of subsurface agricultural drainage water into wildlife refuges and wetlands in central California and reduces agricultural drain water discharge to the lower San Joaquin River. The GBP was implemented through the Agreement for Continued Use of the San Luis Drain between Reclamation and the San Luis and Delta-Mendota Water Authority (Agreement). The Agreement was executed in 2009 for a term of 10 years and is regulated through Waste Discharge Requirements (WDR) issued by the State of California. Since the implementation of the GBP, all discharges of drainage water from the Grassland Drainage Area into wetlands and refuges have been eliminated.

***Proposed Actions for FY 2015*:** Reclamation will continue to implement actions provided for under the then current Court Order and or subsequent Control Schedule if settlement discussions fail. Reclamation will continue to implement the Agreement and meet the monthly and annual load values specified WDR for the GBP.

Land Retirement

Authority: Title XXXIV, P.L. 102-575, Section 3408 (h)

FY 2015 Budget Request (000's): $52

Estimated Inter-agency Breakdown:

Agency	$000's
U.S. Bureau of Reclamation	$52
U.S. Fish and Wildlife Service	$0

Project Description: The purpose of the Land Retirement Program (LRP) is to evaluate impacts and benefits of retiring 15,000 acres of land from irrigated agriculture. The LRP will continue to manage land purchased from willing sellers as part of a Demonstration Project. Five years of monitoring conducted as part of the Land Retirement Demonstration Project (LRDP) indicate that retired lands have great potential to be restored to productive wildlife habitat, with potentially important endangered species benefits.

Current Status: The LRP has acquired approximately 9,300 acres to date, and retired approximately 8,900 acres from irrigated agricultural production. The Land Retirement Program has restored over 6,400 acres of habitat on retired lands and reduced the production of poor quality agricultural drainage on retired lands by over 44,000 acre-feet to date. Restoration efforts on retired lands have

increased wildlife biodiversity and abundance, including Special Status Species. Wildlife surveys of restored units observed important findings of sensitive San Joaquin Valley wildlife species, including Tipton kangaroo rat, San Joaquin kit fox, burrowing owl, coast horned lizard, San Joaquin Valley Coachwhip, Swainson's hawk and a sensitive plant called Hoover's Woolystar.

Proposed Actions for FY 2015: The program will be used to manage lands acquired and restored for the Land Retirement Demonstration Project (LRDP). Restored lands at the Atwell Island Demonstration Project site will continue to be managed to meet the goals of the LRDP. The program expects to achieve a drainage reduction benefit of over 4,100 acre-ft in 2015 and continued benefits to special status species. The LRDP has developed cost effective techniques for restoring retired farmlands in the San Joaquin Valley. The LRDP will continue to evaluate habitat rehabilitation techniques as funding allows to determine the most effective and economical means to provide safe upland habitats to aid in the recovery of threatened and endangered species in the San Joaquin Valley and assist CVP water districts in managing and restoring retired agricultural lands.

San Joaquin River Salinity Management

Authority: P.L. 86-488, San Luis Unit, Central Valley Project, Public Law 111–11 (March. 30, 2009 123 STAT. 991) ''Omnibus Public Land Management Act of 2009'', Section 9504 Water Management Improvement, P.L. 108-361, Section 103(d) (2) (D).

FY 2015 Budget Request (000's): $3,800

Project Description: The San Joaquin River Salinity Management Project implements the stakeholder developed "Westside Regional Drainage Plan" (WRDP) to manage, reduce, and eliminate agricultural drainage to the lower San Joaquin River and adjacent wetlands water supply channels. The WRDP is a key element of Reclamation's Action Plan to Address the Lower San Joaquin River Salinity total maximum daily load (TMDL) and provide drainage service to a portion of the San Luis Unit. The key management components of the WRDP are: 1) Source Control; 2) Groundwater Management; 3) Drainage Reuse Projects, and; and 4) Drain Water Treatment /Salt Disposal. Most of the WRDP activities have occurred within the San Joaquin River Improvement Project (SJRIP) that is owned and operated by Panoche Drainage District. The Federal investment has been over $33.6 million to date.

Current Status: Reclamation has supported implementation of the WRDP for more than ten years through the development of the SJRIP, where agricultural drainwater irrigates salt tolerant crops. Federal funds, with equivalent recipient match, have been used to design and construct infrastructure to manage and distribute agricultural drainwater across the entire 6,000 acre SJRIP. Funding has also supported environmental mitigation. As a result, the SJRIP has displaced 152,000 acre-feet of agricultural drainwater, containing 777,500 tons of salts. Absent the SJRIP, this drainwater would have been discharged into the San Joaquin River.

Proposed Actions for FY 2015: Funding will continue crucial project development support that will bolster WRDP implementation through development of the SJRIP. Federal funds will used to design and construct infrastructure; planting salt tolerant crops like Jose Tall wheatgrass and pistachios; and conversion of open ditches to buried pipelines. The District will provide matching funds for source control, groundwater management, and salt disposal. Under separate funding, Reclamation is

constructing a demonstration treatment facility (see Drainage Management) that will remove salts, selenium, and boron from shallow groundwater beneath the SJRIP.

Program to Meet Standards (PTMS)

Authority: P.L. 86-488, San Luis Unit, Central Valley Project, P.L. 108-361, Section 103(d)(2)(D).

FY 2015 Budget Request (000's): $700

Project Description: The PTMS was initiated pursuant to P.L. 108-361, Section 103(d)(2)(D), which directs the Secretary of the Interior, in consultation with the Governor of California, to meet all existing water quality standards and objectives for which CVP has responsibility prior to increasing export limits from the Sacramento-San Joaquin Delta (Delta) for the purposes of conveying water to CVP contractors south of the Delta or increasing deliveries through an intertie between the California Aqueduct and Delta Mendota Canal. The PTMS may provide greater flexibility in meeting the existing water quality standards and objectives for which the CVP has responsibility and reduce the demand on water from New Melones Reservoir used for that purpose, and to assist the Secretary in meeting any obligations to CVP contractors from the New Melones Project. Reclamation is coordinating implementation with key stakeholders in the San Joaquin Valley. Funding for the PTMS is primarily provided to ensure that the actions identified in the program, many of which are funded under individual authorities, move in concert to achieve the overall program objectives.

Current Status: Reclamation is continuing program implementation. In 2006, Reclamation submitted the PTMS plan to Congress and initiated implementation. Since FY 2007, funding was used to develop forecasting and monitoring tools needed to implement a real time salinity management program, which is not independently authorized, and implementation of a recirculation pilot program. These actions move the program towards its goal of greater flexibility in meeting existing and future water quality objectives. Other projects that support the PTMS include the Franks Tract Project, the New Melones Operations Plan, and the San Joaquin River Salinity Management Project. Due to the complex nature of water supply and quality issues on the lower San Joaquin River, these projects are all needed to contribute to the program's objectives.

Reclamation continues to implement activities described in the State of California State Water Resources Control Board Order WR 2010-0002 and the 2006 Compliance Plan (Plan). The Plan activities include monitoring within the South Delta, review of data and analyses, development of data management practices, and implementing watershed models for the San Joaquin basin. Other outcomes include the identification of salt sources and timing of wetland discharges under a real-time water management program (RTMP). Reclamation continues to evaluate of a combination of alternative salinity control measures. The Central Valley Regional Water Quality Control Board (Water Board) and Reclamation are participating in the Central Valley Regional Salinity Management Plan development and meeting the provisions outlined in Reclamation's Salinity Management Plan. Reclamation is working with irrigation district and wetland stakeholders for developing a framework for the implementation of a RTMP. In 2011 and 2012, Reclamation held stakeholder meetings that introduced the RTMP concept for managing salt loads discharged to the San Joaquin River. Reclamation intends to continue these efforts in 2014. In 2012, Reclamation completed the Westside Salt Assessment (WSA) for the San Joaquin Valley. The WSA included data compilation and completion of a water, salt, and nitrate budgets. The assessment included the

integration of the WESTSIM and WARMF models that identified salt sources. Reclamation prepared Quarterly Reports that present the status of activities supporting implementation of the December 2008 Management Agency Agreement (MAA) between the Water Board and Reclamation. Reclamation implemented a pilot project with Grassland Water District (GWD) for demonstration of salt load monitoring and management in wetland; enhancing WARMF model for forecasting assimilative capacities of various reaches of the San Joaquin River; developed a visualization tool for salt load management in GWD and for the use by other stakeholders; and is working with the Water Board in developing a new MAA for the implementation of a RTMP.

Additionally, Reclamation worked with the San Joaquin Water Districts and provided technical support for water quality monitoring and data management. These efforts improved wetland water conservation and increased awareness of implementing a RTMP for the controlled discharge of salt to the San Joaquin River.

Proposed Actions for FY 2015: Funding will support application of the WARMF model for forecasting assimilative capacities of various reaches of the San Joaquin River; provide support to irrigation districts and wetlands stakeholders for implementation of salt load visualization tools; support working with the Water Board, irrigation districts and wetlands stakeholders in implementing RTMP; support basin plan amendment to address sub-basin RTMP. Reclamation will continue working with the water districts to plan and develop approaches for meeting salt and boron Total Maximum Daily Loads and other water quality criteria. Reclamation will evaluate potential database systems and management interfaces that could benefit RTMP participants.

FISCAL YEAR 2015

ARMY CORPS OF ENGINEERS

Renewed Federal State Partnership

CALFED Coordination, CA

Authority: Energy and Water Development Appropriations Act of 1999; WRDA 2000

FY 2015 Budget Request (000's): *$100*

Project Description: The California Bay Delta is an ecosystem of national significance, and the U.S. Army Corps of Engineers (USACE) is participating with other agencies in addressing the goals in the Interim Federal Action Plan (IFAP) for the Bay Delta. CALFED Coordination allows the Corps to participate in planning activities, interagency meetings and projects. Other coordination activities include watershed based planning and collaboration efforts along the Yuba River to help integrate Delta sustainability goals, as well as in southern California to advance statewide planning activities related to Delta sustainability. Interagency coordination includes the prioritization and implementation of existing projects benefiting the Bay Delta, by developing innovative ways to streamline the planning and implementation process of Bay Delta projects.

Current Status: The funds will be used to continue program support, coordination, and USACE representation efforts in the Federal and State CALFED (now Delta Stewardship Council) process. There are Bay Delta Conservation Plan activities that USACE is involved with as part of the IFAP that are funded through other accounts and programs, such as the Inspection of Completed Works and Regulatory. The State of California's Delta Plan was completed in early FY 2012 and Corps staff is coordinating with the State of California Department of Water Resources (DWR) and the Delta Stewardship Council to help integrate flood risk management elements of the watershed into the plan, as well as ecosystem restoration activities in the Delta.

Key Milestones:

- Attending interagency meetings and coordinating with applicants on processing Section 408 and 404 requests.
- Continue coordination with State of California DWR and Delta Stewardship Council**.**

Habitat Restoration

Hamilton City, CA

Authority: Water Resources Development Act of 2007, §. 1001(8), P. L. 110-114

FY 2015 Budget Request (000's): *$3,800*

Project Description: The project area includes Hamilton City and the surrounding rural area. The Sacramento River is to the east, the Glenn Colusa Canal to the west, and the project boundary extends about two miles north and six miles south of Hamilton City. The project area lies just north of the existing Sacramento River Flood Control project levees and within the area of extent of the Chico Landing to Red Bluff bank protection project. The project will construct a setback levee, degrade an existing levee and revegetate the setback area to restore 1,145 acres of riparian woodland, 261 acres of riparian shrub, and 70 acres of floodplain meadow. Restoration of this floodplain will benefit the recovery of eight federally listed or proposed species in the area. The project will also manage flood risk for the town of Hamilton City and adjacent agricultural lands while providing significant habitat acreage in the floodplain, and will improve fish passage through the delta.

Current Status: The design agreement was executed in 2005 and 90% of the designs were completed in FY 2010. Current year funding will be used to complete a Limited Reevaluation Report in June 2014 which will evaluate some of the design refinements focused on updating costs and benefits, contract award, and construction management. This project was included in the FY 2014 President's Budget as a new start construction project. Pending final allocation of the FY2014 Workplan, the schedule below assumes initiation in FY 2014.

Key Milestones:

- Award contracts for acquisition and propagation of plants and installation of half of the restoration area: Aug 2014
- Initiate removal of existing levee and construction of setback levee in southern portion of Dunning Slough: Oct 2014

<u>Sacramento River (30 Foot) Project, CA</u>

Authority: Rivers and Harbors Act of 1946

FY 2015 Budget Request (000's): *$1,300*

Project Description: The Sacramento Deep Water Ship Channel (DWSC) extends approximately 43 miles from the western region of the central valley near Collinsville to the port located in West Sacramento. The project is located in the counties of Sacramento, Yolo, and Solano. The channel directly supports a critical Coast Guard station for the California Bay Delta. The port is a vital link to the richest agricultural and industrial regions in the world and failure to maintain the channel will severely impact the economic recovery of California and the nation. USACE is responsible for maintaining the channel to an authorized depth of 30 feet and maintaining 33 miles of dual purpose navigation and flood protection levees.

Current Status: The total FY 2015 budget request is $1,300,000, all for navigation and directly related to the Bay Delta Interim Federal Action Plan. The funding provides for critical routine levee maintenance and critical routine dredging to maintain the channel to its authorized depth of 30 feet.

San Joaquin River, Port of Stockton, CA

Authority: Rivers and Harbors Act 1876, 1927 & 1950

FY 2015 Budget Request (000's): $4,952

Project Description: The Stockton Deep Water Ship Channel extends 41 miles from the Port of Stockton to Antioch, CA. The project is located in the counties of Contra Costa, Sacramento and San Joaquin. USACE is responsible for maintaining the channel to the authorized depth of 35 feet and maintaining existing bank protection. The Port of Stockton is the largest inland port and the fifth busiest in California. The port is a vital link to the agriculture industry of the central valley, transporting more than 90% of the fertilizer used by the region's growers and more than 50% of California's bagged rice to Japan. Strict water quality standards set by the state have increased requirements for sampling and handling of dredged material. The presence of endangered species has resulted in shortened dredging windows that have created problems in maintaining channels to authorized depths each year.

Current Status: The total FY 2015 budget request is $4,952,000, all for navigation and directly related to the Bay Delta Interim Federal Action Plan. The funding provides for critical minimal level routine dredging to maintain the ship channel to its authorized depth of 35 feet, mandated water quality certification, and dissolved oxygen environmental compliance mitigation.

Sacramento River and Tributaries (Debris Control), CA

Authority: Rivers and Harbors Act of 1935

FY 2015 Budget Request (000's): *$1,407*

Project Description: Englebright and North Fork Dams are both thin wall concrete arch dams constructed by the California Debris Commission to contain mining debris. Englebright Dam is about 20 miles east of Marysville on the Yuba River. North Fork Dam is on the North Fork of the American River about 5 miles northeast of Auburn. The projects are located in the counties of Nevada and Yuba. The dams prevent mining debris from contaminating and clogging the California Bay Delta.

Current Status: The total FY 2015 budget request of $1,407,000 for navigation, recreation and environmental stewardship activities. The majority of the request is to fund permanently required activities that address Section 7 of the Endangered Species Act until the listed species (Spring Run Chinook Salmon and Central Valley Steelhead) are delisted. Only $600,000 is directly related to the Bay Delta Interim Federal Action Plan. The navigation funding provides for operations of Englebright Dam, maintenance of all appurtenant structures including monitoring and analysis of instrumentation and data collection, and mandated environmental compliance with the recent Yuba River biological opinion including federal, state and local coordination.

Yuba River Ecosystem Restoration, CA

Authority: Flood Control Act of 1970, Section 216 and Flood Control Act of 1962

FY 2015 Budget Request (000's): *$200*

Project Description: The study area is the lower Yuba River channel downstream from Englebright Dam approximately 24 miles upstream from the city of Marysville, Yuba County, California, which lies at the confluence of the Feather and Yuba Rivers. The purpose of the study is to recommend a plan to undertake project modifications for implementation of fish habitat restoration, fish passage improvements, and to prevent hydraulic mining debris stored behind Daguerre Point Dam and Englebright Dam from being a detriment to downstream navigation and other facilities.

Current Status: The study is in the FY 2014 President's Budget as a new start reconnaissance study. Funds are being used to initiate and complete the recon study. The total FY 2015 budget request is $200,000 and it will be used to initiate the feasibility.

Key Milestones:

- Complete reconnaissance study/Initiate feasibility: September 2014/October 2014

Yuba River, CA

***Authority*: Rivers and Harbors Acts of 1896 & 1902**

FY 2015 Budget Request (000's): $3,178

Project Description: The project consists of a debris barrier, Daguerre Point Dam, with dikes across overflow channels and protective works (groins) downstream to maintain the Yuba River in its confined channel to the junction with the Feather River at Marysville. The project is located in Yuba County. Federal responsibility consists of maintaining dikes and protective works to keep the Yuba River in its confined channel. The project provides fish passage at Daguerre Point Dam and prevents mining debris from contaminating and clogging delta waters.

Current Status: The total FY 2015 budget request is $3,178,000 for navigation and environmental stewardship activities. The request is for permanently required activities that address Section 7 of the Endangered Species Act until the listed species (Spring Run Chinook Salmon, Green Sturgeon and Central Valley Steelhead) are delisted. $78,000 provides for operation and maintenance of all appurtenant structures, including instrumentation monitoring and data analysis.

Drought & Floodplain Management

American River, Common Features, CA

Authority: Water Resources Development Act (WRDA) of 1996 (Public Law 104-303), Section 101 (a) (1); WRDA 1999 (Public Law 108-132), Section 366; Energy and Water Development Appropriations Act (EWDAA), 2004 (Public Law108-137), Section 129; EWDAA 2008 (Public Law 110-161), Section 130

FY 2015 Budget Request (000's): *$2,500*

Project Description*:* The Common Features project consists of features authorized by WRDA 1996 that include installation of slurry walls on the Lower American River (LAR) levees, modification of the Sacramento River east levee in the Natomas Basin, installation of telemetering gages above Folsom Dam, and improvements to the flood warning system for the LAR. Additional features authorized by WRDA 1999 include raising and strengthening LAR levees at selected sites, installing a closure structure at Mayhew Drain and modifying the Natomas Cross Canal Levees.

Current Status: Current year funding and the FY 2015 budget request will be used to continue to address design of levee remediation on the American River as authorized under the Water Resources Development Act of 96/99. Continuation of risk reduction levee construction, engineering and design during construction and supervision and administration on the American River as authorized under WRDA96/99. Continue design levee stability and seepage remediation in the Natomas Basin. This project is in the FY 2014 President's Budget. Pending final allocation of the FY2014 Workplan.

Key Milestones:

- Continue design of levee remediation WRDA 96/99.
- Continue risk reduction levee construction WRDA 96/99.
- Continue design levee stability and seepage remediation WRDA 96/99.

Black Butte Lake, CA

Authority: Flood Control Act of 1944

FY 2015 Budget Request (000's): *$2,249*

Project Description*:* The project is located on Stony Creek, a tributary of the Sacramento River, about 9 miles west of the town of Orland, California and consists of an earthfill dam with a maximum height of 140 feet, six dikes, an ungated spillway, and a reservoir with a gross storage capacity of 160,000 acre-feet. The project is located in Glenn and Tehama Counties. The project controls flows to the delta during flood events, reducing the risk of delta island levee failure and saltwater intrusion. The project also provides irrigation water for central valley farming, reducing water consumption from the delta.

Current Status: The total FY 2015 request is $2,249,000 for flood risk management, recreation and environmental stewardship activities. $1,632,000 for flood risk management is directly

related to the Bay Delta Interim Federal Action plan. The flood risk management funding provides for routine required dam operations and maintenance. Operations include limited gate operations, dam safety and post-earthquake inspections, emergency actions, instrumentation monitoring, water management, and real estate inspections. Maintenance includes critical maintenance, repairs to major equipment, vegetation control, and water control data systems modifications.

Buchanan Dam, H.V. Eastman Lake, CA

Authority: Flood Control Act of 1962

FY 2015 Budget Request (000's): $*1,990*

Project Description*:* The project is about 16 miles northeast of the City of Chowchilla on the Chowchilla River. The project is located in Madera and Mariposa Counties. The project consists of an earthfill dam and a reservoir with gross storage capacity of 150,000 acre-feet. The project also includes about 2 miles of channel improvement work and levee construction on Ash and Berenda Sloughs, tributary channels of the river. The dam controls flows to the delta during flood events, reducing the risk of delta island levee failure and saltwater intrusion. The reservoir provides irrigation water for central valley farming, reducing water consumption from the delta.

Current Status: The total FY 2015 budget request is $1,990,000 for flood risk management, recreation and environmental stewardship activities. Only $1,126,000 is directly related to the Bay Delta Interim Federal Action Plan. The flood risk management funding provides for routine required dam operations and maintenance. Operations include limited gate operations, dam safety and post-earthquake inspections, emergency actions, instrumentation monitoring, vegetation control, water management, and real estate inspections. Maintenance includes limited critical maintenance, repairs to major equipment, vegetation control, and water control data systems modifications.

Farmington Dam, CA

Authority: Flood Control Act of 1944

FY 2015 Budget Request (000's): $*558*

Project Description*:* The project is located on Littlejohn Creek about 3½ miles upstream from Farmington and about 18 miles east of Stockton, and consists of a 56 foot high earthfill dam, an ungated saddle spillway, and a reservoir with a gross storage capacity of 52,000 acre-feet. The project is located in San Joaquin and Stanislaus Counties. The dam controls flows to the delta during flood events, reducing the risk of delta island levee failure and saltwater intrusion. The reservoir provides irrigation water for central valley farming, reducing water consumption from the delta.

Current Status: The total FY 2015 budget request is $558,000 for flood risk management activities directly related to the Bay Delta Interim Federal Action Plan. The flood risk funding provides for routine required dam operations and maintenance. Operations include limited gate operations, dam safety and post-earthquake inspections, emergency actions, instrumentation monitoring, water management, and real estate inspections. Maintenance includes limited critical maintenance, repairs to major equipment, vegetation control, and water control data systems modifications.

Hidden Dam, Hensley Lake, CA

Authority: Flood Control Act of 1962

FY 2015 Budget Request (000's): $2,074

Project Description*:* The project consists of a 163 feet high earthfill dam on the Fresno River about 15 miles northeast of Madera, with a reservoir with gross storage capacity of 90,500 acre-feet. The project is located in Madera County.

Current Status: The total FY 2015 budget request is $2,074,000 for flood risk management, recreation and environmental stewardship activities. Only $1,301,000 is directly related to the Bay Delta Interim Federal Action Plan. The flood risk management funding provides for routine required dam operations and maintenance. Operations include limited gate operations, dam safety and post-earthquake inspections, emergency actions, instrumentation monitoring, water management, and real estate inspections. Maintenance includes limited critical maintenance, repairs to major equipment, vegetation control, and water control data systems modifications.

Inspection of Completed Works (ICW), CA

Authority: Flood Control Act of 1944

FY 2015 Budget Request (000's): $4,329

Project Description*:* This program covers levees, floodwall systems and reservoirs throughout California. Upon completion, infrastructure built under this program is transferred to the sponsoring cities, towns, and special use districts that own and operate the projects. The projects require maintenance after construction in order to ensure the project will continue to function as intended. The priority of the ICW program has been levees because of public safety aspects. The basic objectives of the USACE Levee Safety Program are (1) to develop balanced and informed assessments of the nation's levees; (2) to evaluate, prioritize and justify levee safety decisions, and (3) to make recommendations to improve public safety associated with levee systems. One of the main activities is inspections of federally authorized projects operated and maintained by a non-federal sponsor. The purpose of the inspections is to determine if levee systems will perform as expected; identify deficiencies or areas which need monitoring or immediate repair; identify any changes over time; and collect information in order to be able to

make informed decisions about future actions. Other activities include updating information in the National Levee Database; screening levees to begin ranking them in order of risk; coordinating Levee Safety Program efforts with public sponsors or stakeholders; reviewing sponsor proposed alterations, improvements, excavations or construction which are in accordance with USACE policy and guidance for such proposal i.e. Section 208/408 proposals; and updating project operation and maintenance manuals.

Coordination between USACE and other federal, state, and local agencies is essential for proper accomplishment of this program. In addition to satisfying USACE requirements, the improved inspection results will be made available on the National Levee Database and will be of great value to federal, state and local agencies tasked with the development and implementation of state and local Levee Safety Programs.

Current Status: The total FY 2015 budget request is $4,329,000, all for flood risk management and directly related to activities and projects in the Bay Delta Interim Federal Action Plan. The program includes routine inspections of levee systems, consultation for conflicts relating to levee vegetation policy, communicating with local sponsors, providing policy updates, issuing PL 84-99 eligibility notifications, and technical review of Section 208.10 and section 408 alteration requests to modify existing federal infrastructure.

Isabella Lake, CA

Authority: Flood Control Act of 1944

FY 2015 Budget Request (000's): *$1,560*

Project Description*:* The dam is located about 50 miles northeast of Bakersfield, near the confluence of the north and south forks of the Kern River; the auxiliary dam is about ½ mile east of the main dam. The project comprises a 185 foot high earthfill dam, an ungated concrete spillway, and a 100 foot high earthfill auxiliary dam, creating a reservoir with a gross storage capacity of 570,000 acre-feet. The project is located in Kern County. The project controls releases for farming irrigation in the Central Valley and reduces water consumption from the delta for agriculture needs. Isabella Lake is connected to Kern Friant Canal to deliver water through the Cross Valley Canal to the California Aqueduct for consumptive use.

Current Status: The total FY 2015 budget request is $1,560,000 for flood risk management and environmental stewardship activities. $1,445,000 funds flood risk management activities which are directly related to the Bay Delta Interim Federal Action Plan . The flood risk management funding provides for routine required dam operations and maintenance. Operations includes limited gate operations, dam safety and post-earthquake inspections, emergency actions, instrumentation monitoring, water management, and real estate inspections. Maintenance includes limited critical maintenance, repairs to major equipment, vegetation control, and water control data systems modifications.

Isabella DSAP, CA

Authority: Flood Control Act of 1944

FY 2015 Budget Request (000's): *$10,500*

Project Description*:* The dam is located about 40 miles NE of Bakersfield, near the confluence of the north and south forks of the Kern River, in Kern County. The auxiliary dam is about ½ mile east of the main dam. The project comprises a 185-foot-high earth fill dam, an ungated concrete spillway, and a 100-foot-high earth fill auxiliary dam, which creates a reservoir with a gross storage capacity of 570,000-acre-feet. The Isabella Lake project dams are currently classified as being at a high risk of failure with significant consequences downstream. There are three primary deficiencies (hydrologic, seismic, and seepage/piping) at the project which could lead to significant life loss in the event of a dam failure. Work to be performed includes continuing preconstruction engineering and design (PED) of the Dam Safety Modification (DSM) project and start of construction. The recommended risk management plan consists of the following: 1) A new Emergency Spillway which will be a 900-foot wide Labyrinth Spillway with a 16-foot dam raise to pass the probable maximum flood (PMF); 2) buttress and foundation treatments at the Auxiliary dam to increase seismic stability and remediate seepage concerns; 3) a filter and drain system in the downstream slope of the Main dam to increase stability; 4) modifying the existing spillway to raise the spillway walls, anchor the walls and ogee crest for the additional head during operation, and line the chute with concrete to mitigate for plucking and erosion; and 5) relocation or realignment of the Borel canal to reduce seepage and piping risks.

Current Status: Current year funding and the FY 2015 Budget request will be used to continue the PED phase.

Key Milestones:

- Dam Safety Modification Report signed December 2012
- Complete PED 2016
- Initiate construction 2014
- Relocate / reconstruct Highway 178

Los Angeles County Drainage Area, CA

Authority: Flood Control Act of 1936 (as amended 1937, 1941, 1950)

FY 2015 Budget Request (000's): *$5,887*

Project Description*:* The project is located in the County of Los Angeles, California. The project includes routine operation and maintenance of five large flood risk management dams (Whittier Narrows, Santa Fe, Lopez, Hansen, and Sepulveda), and Haines Canyon Debris Basin as well as about 34 miles of 517 total miles of flood control channels within Los Angeles County.

Current Status: The total FY 2015 budget request is $5,887,000 for flood risk management, recreation and environmental stewardship activities. $5,551,000 funds flood risk management activities which are directly related to the Bay Delta Interim Federal Action Plan. The flood risk management funding provides for routine required dam operations and maintenance. Operations includes dam safety, water management, and real estate inspections. Maintenance includes maintenance of all appurtenant structures including flood control channels, reservoir operations, maintenance of permanent operating equipment, and instrument maintenance.

Merced County Streams, CA

Authority: Flood Control Act of 1944

FY 2015 Budget Request (000's): *$394*

Project Description*:* The project consists of the following flood control improvements:

1) Five flood retention dams
   Mariposa, 88 feet high (15,000 acre-feet), 18 miles east of Merced.
   Owens 75 feet high (3,600 acre-feet), 16 miles east of Merced.
   Bear, 92 feet high (7,700 acre-feet), 16 miles east of Merced.
   Burns, 53 feet high (7,000 acre-feet), 13 miles NE of Merced.
   Castle, 40 feet high (6,400 acre-feet), 6 miles NW of Merced.
2) Black Rascal and Owens Diversion Canals
3) Channel improvements on various streams in the vicinity of Merced

The project is located in Mariposa and Merced Counties. The dams control flows to the delta during flood events, reducing the risk of delta island levee failure and saltwater intrusion. The dams and diversion canals provide irrigation water for central valley farming, thereby reducing water consumption from the delta.

Current Status: The total FY 2015 budget request is $394,000 for flood risk management activities which are directly related to the Bay Delta Interim Federal Action Plan. The flood risk management funding provides for routine required dam operations and maintenance. Operations include limited gate operations, dam safety and post-earthquake inspections, emergency actions, instrumentation monitoring, water management, and real estate inspections. Maintenance includes limited critical maintenance, repairs to major equipment, vegetation control, and water control data system modifications.

New Hogan Lake, CA (O&M)

Authority: Flood Control Act of 1962

FY 2014 Budget Request (000's): *$2,659*

Project Description: The project is located on the Calaveras River, about 28 miles northeast of Stockton, and comprises a rock-fill dam with an impervious earth core and a maximum height of 200 feet together with four dikes with a maximum height of 18 feet, and a gated spillway creating a reservoir with a gross storage capacity of 325,000 acre-feet. The project is located in Calaveras County. The project controls flows to the delta during flood events, reducing the risk of delta island levee failure and saltwater intrusion. New Hogan Lake provides irrigation water for central valley farming, thereby reducing water consumption from the delta.

Current Status: The total FY 2015 budget request is $2,659,000 for flood risk management, recreation and environmental stewardship activities. $1,568,000 for flood risk management activities is directly related to the Bay Delta Interim Federal Action Plan. The flood risk management funding provides for routine required dam operations and maintenance. Operations include limited gate operations, dam safety and post-earthquake inspections, emergency actions, instrumentation monitoring, water management, and real estate inspections. Maintenance includes limited critical maintenance, repairs to major equipment, vegetation control, and water control data systems modifications.

New Melones Lake, CA

Authority: Flood Control Act of 1962

FY 2015 Budget Request (000's): *$2,278*

Project Description*:* The project extends along the Stanislaus River from Goodwin Dam to the confluence with the San Joaquin River. The project provides recreation access to the Lower Stanislaus River. The project is located in Calaveras, San Joaquin, Stanislaus, and Tuolumne counties. New Melones Dam controls flows to the delta during flood events, reducing the risk of delta island levee failure and saltwater intrusion. New Melones Lake provides irrigation water for central valley farming thereby reducing water consumption from the delta.

Current Status: The total FY 2015 budget request is $2,278,000 for flood risk management, recreation, and flood risk management activities. $350,000 for flood risk management activities is directly related to the Bay Delta Interim Federal Action Plan. The flood risk management funding provides for routine required dam operations and maintenance. Operations and maintenance includes minimum channel operation and maintenance to prevent failure and maintain integrity of the project; reducing inspections and engineering consultations.

Pine Flat Lake, CA

Authority: Flood Control Act of 1944

FY 2015 Budget Request (000's): *$3,278*

Project Description*:* Pine Flat Dam, located on the Kings River about 25 miles east of the city

of Fresno, is a straight, gravity-type concrete structure, 429 feet high, with a gate-controlled spillway in the central section, and creates a reservoir of 1,000,000 acre-feet. The project is located in Fresno County. The project controls releases for irrigation in the central valley and reduces water consumption from the delta for agriculture needs. Pine Flat Lake is connected to Kern Friant Canal to deliver water through the Cross Valley Canal to the California Aqueduct for consumptive use.

Current Status: The total FY 2015 budget request is $3,278,000 is for flood risk management, recreation and environmental stewardship activities. $2,220,000 for flood risk management activities is directly related to the Bay Delta Interim Federal Action Plan. The flood risk management funding provides for routine required dam operations and maintenance. Operations include gate operations, dam safety and post-earthquake inspections, emergency actions, instrumentation monitoring, water management, and real estate inspections. Maintenance includes limited critical maintenance, repairs to major equipment, vegetation control, and water control data system modifications.

Sacramento River Bank Protection Project, CA

Authority: Flood Control Act of 1960 (Public Law 86-645), p. 183; River Basin Monetary Authorization Act of 1974 (Public Law 93-251), Section 202; Joint Resolution of Congress in 1983; WRDA 1986 (Public Law 99-662), Section 601(a); WRDA 2007 (Public Law 110-114), Section 3031.

FY 2015 Budget Request (000's): *$3,000*

Project Description*:* The Sacramento River Bank Protection project is located in north-central California, along the Sacramento River and its principal tributaries from Sacramento River RM 0.0 at Collinsville to Chico Landing at RM 194. It is within the limits of the existing Sacramento River Flood Control Project levees and includes Butte Basin, Cache Slough, and a portion of the Sacramento-San Joaquin Delta slough. The project meanders through eight counties including Tehama, Glenn, Butte, Colusa, Sutter, Yolo, Solano, and Sacramento. The project provides a long-range program of bank protection to protect the levees within the limits of the Sacramento River Flood Control Project from erosion. It prevents undermining of levee sections and includes fish and wildlife mitigation features. Some recreational facilities have been provided along the river.

Current Status: Current year funding and the FY 2015 budget request will be used to continue design and construction of bank protection and habitat mitigation, engineering and design during construction, contract award, construction management, and to continue the Post Authorization Change Report/Environmental Impact Statement/Environmental Impact Report. This project is in the FY 2014 President's Budget. Pending final allocation of the FY2014 Workplan, the schedule below assumes continuation in FY 2014.

Key Milestones:

- Biological Compliance for Phase 2 – ongoing through end of 80,000 L.F. PACR

- Complete PACR – December 2014
- Award construction for Phase 2 repair of erosion sites, about 5,000 to 10,000 L.F. – Sep 2015
- Construct RM 41.9 and RM 55.2

Sacramento River Bank Protection Project (GRR), CA

Authority: Flood Control Act of 1950, Pub .L. 81-516, § 205; Flood Control Act of 1960, Pub. L. 86-645, § 203, 74 Stat. 488, 498 (1960); River Basin Monetary Authorization Act, Pub. L. 93-252, § 202, 88 Stat. 49 (1974); Water Resources Development Act of 2007, Pub. L. 110-114, § 3031, 121 Stat. 1041, 1113.

FY 2015 Budget Request (000's): *$500*

Project Description: The project is located in north-central California, along the Sacramento River and its principal tributaries from Sacramento River RM 0.0 at Collinsville to Chico Landing at RM 194. It is within the limits of the existing Sacramento River Flood Control Project levees and includes Butte Basin, Cache Slough, and a portion of the Sacramento-San Joaquin Delta slough. The project meanders through eight counties including Tehama, Glenn, Butte, Colusa, Sutter, Yolo, Solano, and Sacramento. The project provides a long-range program of bank protection to protect the levees within the limits of the Sacramento River Flood Control Project from erosion. It prevents undermining of levee sections and includes fish and wildlife mitigation features. Some recreational facilities have been provided along the river. Since the initial bank protection contract was let in June 1963, about 837,462 lineal feet of bank protection has been provided. Approximately 83,491 lineal feet of bank protection, including 80,000 authorized by WRDA 2007, remains to be placed on the second phase of this project.

Current Status: A General Reevaluation Report (GRR) for a third phase is being conducted to address remaining and potential future sites which will require Congressional authorization.

Key Milestones:
- Sign a Feasibility Cost Sharing Agreement with the The State of California in the third quarter of FY 2014 and begin working on the GRR.
- Continue the GRR in FY 2015.

Santa Ana River Basin, CA

Authority: Flood Control Act of 1936 (as amended 1938)

FY 2015 Budget Request (000's): *$3,945*

Project Description*:* The project is located in the counties of Riverside, Los Angeles and Orange. The project includes routine operation and maintenance of five dams (San Antonio, Prado, Carbon Canyon, Brea, and Fullerton) with four recreational areas and about 15.7 miles of flood control channels along San Antonio and Chino Creeks within the Santa Ana River Basin.

Current Status: The total FY 2015 budget request is $3,945,000 for flood risk management, recreation and environmental stewardship activities. $3,680,000 funds flood risk management activities which are directly related to the Bay Delta Interim Federal Action Plan. The flood risk management funding provides for routine required dam operations and maintenance. Operations includes: water management, dam safety, and real estate inspections. Maintenance includes: maintenance of all appurtenant structures including flood control channels, reservoir operations, maintenance of permanent operating equipment, and instrument maintenance.

Scheduled Reservoir Operations, CA

Authority: Flood Control Act of 1944

FY 2015 Budget Request (000's): *$1,538*

Project Description: The project is a nationwide program to facilitate and coordinate the operations of federal and non-federal dams for which there is a federal interest and investment in providing dedicated flood space. The project includes coordination and management of channel flows and releases from 15 California Section 7 dams, and reduces the risk of delta island levee failure and saltwater intrusion.

Current Status: The total FY 2015 budget request is $1,538,000, all for flood risk management and directly related to activities and projects in the Bay Delta Interim Federal Action Plan. The program includes data collection efforts and coordination for operational decisions with other federal and non-federal dams, especially for channel flows and flood releases, water control manual coordination under NEPA and ESA, and other activities associated with safe operation of Section 7 dams.

Success Lake, CA

Authority: Flood Control Act of 1944

FY 2015 Budget Request (000's): *$2,288*

Project Description*:* The project is located on the Tule River, about 6 miles east of Porterville, and comprises an earthfill dam with a maximum height of 142 feet with an ungated saddle spillway, and an auxiliary earthfill dam or dike about 40 feet high, creating a reservoir gross storage capacity of 85,000 acre-feet. The project is located in Tulare County. The project controls releases for farming irrigation in the central valley and reduces water consumption from the delta for agriculture needs. Success Lake is connected to the Kern Friant Canal to deliver water through the Cross Valley Canal to the California Aqueduct for consumption use.

Current Status: Total FY 2015 budget request is $2,288,000 for flood risk management, recreation and environmental stewardship activities. $1,518,000 for flood risk management is

directly related to the Bay Delta Interim Federal Action Plan. The flood risk management funding provides for routine required dam operations and maintenance. Operations includes limited gate operations, dam safety and post-earthquake inspections, emergency actions, instrumentation monitoring, water management, and real estate inspections. Maintenance includes limited critical maintenance, repairs to major equipment, vegetation control, and water control data systems modifications.

Terminus Dam, Lake Kaweah, CA

Authority: Flood Control Act of 1944

FY 2015 Budget Request (000's): *$2,160*

Project Description*:* The project is located on the Kaweah River about 20 miles east of Visalia, and comprises an earth fill dam with a height of 200 feet, with an auxiliary earth fill dam 130 feet high and fuse gates adjacent to the left abutment of the dam, creating a reservoir with a storage capacity of 185,630 acre-feet. The project is located in Tulare County. Terminus Dam controls releases for irrigation in the central valley which reduces water consumption from the delta for agriculture needs. Lake Kaweah is connected to the Kern Friant Canal delivering water through the Cross Valley Canal to the California Aqueduct for consumptive use.

Current Status: The total FY 2015 budget request is $2,160,000 to support flood risk management, recreation and environmental stewardship activities. $1,325,000 for flood risk management activities is directly related to the Bay Delta Interim Federal Action Plan. The flood risk management funding provides for routine required dam operations and maintenance. Operations include limited execution of gate operation, dam safety and post-earthquake inspections, emergency actions, instrumentation monitoring, water management, and real estate inspections. Maintenance includes limited critical maintenance, repairs to major equipment, vegetation control, and water control data systems modifications.
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FISCAL YEAR 2015

US GEOLOGICAL SURVEY

Habitat Restoration

FY 2015 Budget Request (000's): $8,384

The California Bay-Delta Ecosystem (Delta) is recognized as one of the world's threatened treasures of biodiversity, supporting unique native species and their critical tidal and wetland habitats. Like other urban estuaries, this system has a history of anthropogenic changes involving multiple stressors including altered hydrodynamics, environmental contaminants, and invasive species that have degraded the ecosystem. The native fish fauna has been much reduced and key species are now protected by the Endangered Species Act. Among these species, the threatened Delta smelt most prominently impacts human decisions about the movement of water through the system. The recovery of this species requires an improved understanding of habitat and ecosystem functions within the Delta. Policymakers now must plan for systemic changes that influence all stressors and parts of the system, including watersheds, rivers, deltas, bays, and the ocean. To assist policymakers, USGS scientists have developed a network of real-time flow monitoring stations in the Delta. These stations will be augmented to assist with determining the causes and rates of decreased sediment supply and to monitor turbidity fields in the Delta, which may have implications for Delta smelt survival and movement. The USGS has expanded its research efforts to understand how flow conditions, water quality, and fish behavior affect fish survival, particularly Delta smelt survival. In doing so, the USGS will advance fundamental understanding, and the interactions among, the physical, chemical, biological, human components and multiple stressors of the Delta system, to improve knowledge of system impacts to the Delta smelt and its critical habitat. Using this advanced understanding, USGS scientists will improve and develop advanced models of the Delta system to represent more comprehensively and predict more realistically Delta ecosystem component responses to management and restoration, including effects of climate change and potential seismic events. The USGS will advance the capability to collect, store, access, visualize, and share data and information about the Delta system, the vulnerabilities of Delta ecosystem components to change, and the potential responses to these vulnerabilities. The 2015 budget reflects the increased emphasis on this important work.

Interagency Ecological Program

Authority: Organic Act of March 3, 1879, as amended (43 U.S.C. 31 et seq.)

FY 2015 Budget Request (000's): $3,918
Ecosystems (000's):$ 1,089
Natural Hazards (000's): $619
Energy, Minerals, and Environmental Health (000's): $116
Water Resources (000's):$2,094
Core Science Systems (000's): $604

Project Description: In cooperation with other agencies in the Interagency Ecological Program (IEP: US Fish & Wildlife Service, US Bureau of Reclamation, USGS, US Army Corps of Engineers, US Environmental Protection Agency, CA Water Resources Control Board, CA Department of Water Resources, and CA Department of Fish & Game), the USGS is measuring within-Delta salt and water transfers and Delta outflow into the Bay, providing information needed for documenting salt transport mechanisms and managing freshwater flow to meet salinity standards. These studies also include areas in Suisun Marsh and South San Francisco Bay, as well as measuring temperature and suspended sediment at the entrance of the San Joaquin River into the Delta and special scientific studies of flows and turbidity in the Cache Slough and Liberty Island area.

Added in 2010 was the addition of 16 flow stations and 14 turbidity sensors, associated with some of the added flow stations, to monitor and assess turbidity patterns and intensities in the Delta. These data may be used to compare to occurrences of Delta smelt in an attempt to collect information relating Delta smelt migration to turbidity. In 2015, this effort will be expanded with a proposed increase in funding to continue work on the relationship of an increase in turbidity which is the signal that triggers the migration of smelt and that smelt do move with the turbidity plumes.

Current Status: The hydrodynamic flow and salinity stations funded by the IEP are an integral part of the entire flow network for the Delta. The data from this flow network are used in real-time decisions by water operators to divert water from the Delta to other parts of California (south and parts of the greater San Francisco bay area). More than 25 million Californians drink water originating from the Delta and this water is used to irrigate millions of acres of agricultural lands. The importance of this network also plays a key role in the ongoing attempt at assessing the migration patterns of threatened and endangered fish species in the Delta (salmon, pelagic organisms, etc.), and provides the framework for understanding the physical, chemical and biological interactions in the Delta, necessary information for solving the complex ecological and water supply issues in the Delta. The addition of the turbidity-flow data collection is focusing on the potential relationship between turbidity movement and smelt migration.

Related activities include studies of flow and salt transport in the central and south Delta, and Suisun Marsh, and flow and turbidity fields in relation to phytoplankton and Delta smelt in the northern Delta.

Delta Science Program Oversight (Lead Scientist)

Authority: Organic Act of March 3, 1879, as amended (43 U.S.C. 31 et seq.)

FY 2015 Budget Request (000's): $662
Delta Science Program Oversight (000's): $662

Project Description: The U.S. Geological Survey provides support for the CA Bay Delta Program's Lead Scientist and staff.

The Delta Program is a multi-decade, multi-billion dollar cooperative effort of more than 20 State and Federal agencies working to improve the quality and reliability of California's water supplies and revive the San Francisco Bay-Delta ecosystem. The Delta Science Program, led by the Lead Scientist, seeks to provide the best possible unbiased scientific information to inform water and environmental decision-making in the Sacramento-San Joaquin Delta. The Science Program is tasked with: providing a comprehensive and integrated scientific context for Delta activities; ensuring the advance of science needed to guide Bay Delta decisions and water project operations; establishing a framework to identify and articulate relevant areas of scientific uncertainty; and developing strategies to reduce uncertainties and track progress toward Delta goals. This is carried out through funding research, synthesizing and communicating scientific information to policymakers and decision-makers, promoting independent scientific peer review, organizing and running public workshops on science topics of interest and coordinating with Delta agencies to promote science-based adaptive management.

The Lead Scientist works with the Delta Science Program staff, the Delta Independent Science Board, Delta implementing agency managers and scientists, and the scientific community at large to promote the use of peer-reviewed science throughout the Delta Program. The Lead Scientist identifies, refines and implements the science agenda for the Delta Program.

The Lead Scientist has oversight responsibility to ensure that Delta studies are relevant, authoritative and objective and that they progressively reduce uncertainties about critical issues, add to the knowledge that aids water management and ecosystem restoration, and help prepare for future uncertainties. The Lead Scientist communicates new findings and current scientific understandings to the Delta agency managers, stakeholders, scientific community and the public.

Current Status: The Lead Scientist and Staff continue to facilitate the collaboration among all the partners in the Delta Stewardship Council and to work with Delta Science Program staff to ensure science projects address issues identified by the partners.

Adaptive Management of SF Bay

Authority: Organic Act of March 3, 1879, as amended (43 U.S.C. 31 et seq.)

FY 2015 Budget Request (000's): $1,200
Ecosystems (000's) $1,200

Project Description: The objective of this work is to provide science in support of adaptive management of ecosystems that have near-term societal concern and significant long-term societal value. These studies are designed to serve local ecosystem management needs and to provide transferable knowledge and approaches. Efforts focus in areas where new integrated science approaches can be developed to address the needs of a diverse group of decision-makers. Activities require collaboration and integration of expertise to achieve a system-scale understanding of the natural and anthropogenic factors affecting ecosystems and to better understand the interactive nature of resources and the environment.

Current Status: Current studies cover a range of activities from the watershed and Delta through Suisun Bay to South Bay and the Golden Gate dealing with climate change, hydrodynamic processes, sediment budgets, contaminant and ecological processes. The information and knowledge produced is integral to the developing understanding of wetland management and restoration, salt pond reclamation, salinity control and the success of native fish and their movements within and through the Delta.

Sacramento Basin National Water Quality Assessment (NAWQA)

Authority: Organic Act of March 3, 1879, as amended (43 U.S.C. 31 et seq.)

FY 2015 Budget Request (000's): $1,000
Water Resources (000's): $1,000

Project Description: The National Water-Quality Assessment (NAWQA) Sacramento Basin Program is designed to assess the status and trends of water quality in the basin, and to understand the factors that affect it. Specifically, the Program goals are to characterize the condition of streams and ground water in the basin, evaluate how the water quality is changing over time, and to identify how natural features and human activities affect the quality of streams and ground water. The NAWQA Program is a long-term cyclical study that began in 1991.

Current Status: The Sacramento Basin Program has completed the first cycle, and is preparing for its second cycle. Recent activity has focused on the evaluation of Dissolved Organic Carbon (DOC) transported by the Sacramento River into the Delta and its effects on drinking water quality. The CALFED Drinking Water Program needs information on DOC concentrations and loads to the Delta. This project will provide critical information on the long-term trends in carbon loading and will improve the accuracy of flow measurements from the upstream sources. The increase requested in 2015 will enhance this work.

San Joaquin Basin National Water Quality Assessment (NAWQA)

Authority: Organic Act of March 3, 1879, as amended (43 U.S.C. 31 et seq.)

FY 2015 Budget Request (000's): $1,000
Water Resources (000's): *$1,000*

Project Description: The National Water-Quality Assessment (NAWQA) San Joaquin Basin Program is designed to assess the status and trends of water quality in the basin, and to understand the factors that affect it. Specifically, the Program goals are to characterize the condition of streams and ground water in the basin, evaluate how the water quality is changing over time, and to identify how natural features and human activities affect the quality of streams and ground water. The NAWQA Program is a long-term cyclical study that began in 1991.

The San Joaquin Basin National Water Quality Assessment is a long-term Program, and is one of 42 nationwide. Cycle 1 (Water Quality Status) started in 1991, and was completed in 2001.

Cycle 2 (Water Quality Trends and Understanding) began in 2001; data has been collected with analysis and synthesis nearing completion. Planning for Cycle 3 will begin once Cycle 2 is complete.

In the second cycle, efforts now in process focus on five major activities:
(1) Status assessment of mercury; (2) Status assessment of ground-water drinking water sources; (3) Assessment of water-quality trends in streams and ground water; (4) Topical study of transport of anthropogenic and natural contaminants to community supply wells; (5) Topical study of agricultural chemicals: sources, transport and fate.

Current Status: The San Joaquin-Tulare Basin Program is in its second study cycle, and is one of five areas nationwide participating in an intensive study of the sources, transport, and fate of agricultural chemicals in relatively small agricultural watersheds. The primary goal of these studies is to estimate a mass balance for water and chemicals. To achieve this goal, all compartments of the hydrologic cycle have been monitored. These compartments include the atmosphere, surface runoff, vadose zone, and ground water. In addition, ground-water processes along a flowpath, and interactions between ground water and surface water at the toe of the flowpath have been monitored. The San Joaquin site is located within the Merced River Basin on the east side of the valley. The objective is to apply the information and understanding gained in this intensive study to larger areas, which in this case includes the Sacramento-San Joaquin River Delta. The increase requested in 2015 will enhance this work.

FISCAL YEAR 2015

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Renewed Federal State Partnership

General Oversight and Coordination

Authority: Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.)

FY 2015 Budget Request (000's): $110

Project Description: Activities include participation at CALFED agency coordination meetings, Bay-Delta Public Advisory Committee meetings, California Bay-Delta Authority meetings, input into the development of and review of CALFED program plans, crosscut budgets, and annual reports.

Current Status: NOAA is coordinating with other CALFED agencies to implement the Delta Vision Strategic Plan, a product of the Governor's Delta Vision Blue Ribbon Task Force. This coordination has focused on identifying existing governance structures and opportunities for integrating CALFED, Delta Vision implementation, and other planning efforts that are underway in the Delta, including the development of the Ecosystem Restoration Program (ERP) Conservation Strategy.

Interagency Ecological Program

Authority: Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.)

FY 2015 Budget Request (000's): $70

Project Description: The Interagency Ecological Program (IEP) is an estuarine ecological monitoring and special study collaboration by three state and six federal agencies with management and/or regulatory responsibilities in the San Francisco Estuary and Sacramento-San Joaquin Delta, California. The three state agencies are the California Department of Fish and Wildlife (CDFW), California Department of Water Resources (DWR), and California State Water Resource Control Board (SWRCB); the federal agencies include the U.S. Fish and Wildlife Service (USFWS), U.S. Bureau of Reclamation (USBR), National Oceanic and Atmospheric Administration, U.S. Geological Survey (USGS), U.S. Environmental Protection Agency (USEPA), and the U.S. Army Corps of Engineers (USACE). The purpose of this collaboration is to gather in an efficient, coordinated and cooperative way the ecological

information required by the agencies to effectively carry out their management and regulatory responsibilities.

The goals and objectives to address the mission of the IEP are (1) describe the status and trends of aquatic ecological factors of interest in the estuary; (2) develop an understanding of environmental factors that influence observed aquatic ecological status and trends; (3) use knowledge of the previous information in a collaboration process to support natural resource planning, management, and regulatory activities in the estuary; (4) continually reassess and enhance long-term monitoring and research activities that demonstrate scientific excellence; (5) provide scientific information about the estuary that is accurate, accessible, reliable, and timely; and (6) respond to management needs in a timely fashion.

Current Status: The Interagency Ecological Program is comprised of long-term monitoring, water operations monitoring and special studies. The IEP is committed to conducting the mandated monitoring studies required by NOAA and FWS biological opinions and SWRCB Water Rights Decision D-1641. There is also a commitment to continue providing the "real-time" data needed to make water operation decisions. NOAA is one of nine agencies with IEP implementation responsibility. At present, the Assistant Regional Administrator represents NOAA as the IEP Director at quarterly meetings and staff participates on various work groups as needed. NOAA is also processing the IEP Scientific Collection permit.

Smarter Water Supply & Use

Water Operations Oversight and Coordination

Authority: Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.)

FY 2015 Budget Request (000's): $1000

Project Description: On June 4, 2009, NOAA issued its biological opinion on the long-term operations of the CVP and SWP. USBR and the DWR are implementing the Opinion in consultation and coordination with NOAA.

Current Status: NOAA staff are assisting USBR and DWR in the implementation of NOAA's OCAP Opinion, including ongoing reviews of operations forecasts, participating on technical teams, and assisting in adaptive management decisions regarding real time operations within the sideboards of the OCAP Opinion. Some of the reasonable and prudent alternative (RPA) actions require NOAA technical review of new studies and monitoring stations. Following issuance of the OCAP Opinion, Endangered Species Act (ESA) section 7 consultations on infrastructure projects, long-term water contracts, fish screens, temperature control structures, and fish passage above dams have been needed.

As a result of completing one of the most complex and controversial biological opinions ever achieved by NOAA, staff continue to respond to Freedom of Information Act requests, questions regarding the science used in the biological opinion, and Court mandated deadlines and processes.

Habitat Restoration

Ecosystem Restoration Program (ERP) Oversight & Coordination

Authority: Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), Magnuson-Steven Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.)

FY 2015 Budget Request (000'): $140

Project Description: As an Ecosystem Restoration Program (ERP) implementing agency, NOAA will continue ERP planning efforts in collaboration with the FWS, CDFW and the California Bay-Delta Authority (CBDA). Activities include program planning and implementation, tracking schedules, finances, and performance; coordination of Program activities to ensure Program balance and integration with other CALFED Programs; coordination of public outreach and involvement, including tribal, environmental justice, and public advisory activities in accordance with the Federal Advisory Committee Act. NOAA, through an interagency process, is also involved in planning and developing the format and guidelines for preparing Action Specific Implementation Plans (ASIP) for all CALFED projects in order to meet the requirement of theESA, California Endangered Species Act, and the Natural Community Conservation Planning Act (California).

Current Status: NOAA will continue management-level participation in CALFED and CBDA coordination meetings, continue work on multi-year planning documents, work on defining and streamlining the ASIP, participate in developing the Delta Regional Ecosystem Implementation Plan, the South Delta Improvements Package, and the Proposal Solicitation Process (PSP), and serve on annual PSP selection panels to review and fund specific projects in the CALFED program. Staff and Management participate in quarterly ERP Science Board meetings to assist coordination of implementation and integration of the ERP program overall in meeting CALFED goals and objectives.

Screen Engineering and Review

Authority: Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), Magnuson-Steven Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.).

FY 2015 Budget Request (000's): $70

Project Description: Activities include technical review and comment of proposed projects under the Anadromous Fish Screen Program (AFSP). The AFSP is to protect juvenile Chinook salmon (all runs), steelhead trout, green and white sturgeon, striped bass and American shad from entrainment at priority diversions throughout the Central Valley. Section 3406(b)(21) of the Central Valley Project Improvement Act (CVPIA) requires the Secretary of the Interior to

assist the State of California in developing and implementing measures to avoid losses of juvenile anadromous fish resulting from unscreened or inadequately screened diversions on the Sacramento and San Joaquin Rivers, their tributaries, the Delta, and the Suisun Marsh. Additionally, all AFSP projects meet Goal 3 of the CALFED Ecosystem Restoration Program's (ERP) Draft Stage 1 Implementation Plan (8/1/01, Page 22) which states that "the goal is to maintain and/or enhance populations of selected species for sustainable commercial and recreational harvest, consistent with the other ERP Strategic Goals."

Current Status: Efforts in this program element have scaled down over the past couple of years due to decreased emphasis on screening diversions and greater emphasis on habitat restoration by the ERP program in general. However, staff will continue to review CALFED-funded fish screens and improvement projects as they develop for compliance with section 7 of the Endangered Species Act and existing biological opinions. Specific issues for program staff include reviewing the State Water Project and Central Valley Project Fish Collection Facilities in the Delta. Staff participates on the Tracy Technical Advisory Team, South Delta Fish Facility Forum, and Central Valley Fish Facility Team, all of which are involved in developing new ways to salvage fish from water and debris and return them unharmed to the Delta. Staff review and comment on fish studies, research projects, facility evaluations, and operations and maintenance of the Delta fish facilities for compliance with current biological opinions.

Many of the research projects are funded by either CVPIA or CALFED. Staff works with our engineers in Santa Rosa and at the Bureau of Reclamation to approve CVPIA funded fish screen projects. Current staffing is one biologist part-time in support of this program element. In the future there are studies and screen improvements required in the OCAP biological opinion that will have to be evaluated and commented on with respect to listed fish concerns.

FISCAL YEAR 2015

ENVIRONMENTAL PROTECTION AGENCY

EPA's support of the Interim Federal Action Plan comprises four programs:

The San Francisco Bay-Delta Estuary program is aimed at protecting and restoring water quality and ecological health of the estuary through partnerships, interagency coordination, and project grants. The FY 2015 request includes $4.7 million to continue a competitive grant program to implement projects that improve water quality and restore habitat in San Francisco Bay watersheds.

In FY 2015, the National Estuary Program will provide $600,000 in support of the San Francisco Estuary Partnership's implementation of their Comprehensive Conservation and Management Plan (CCMP), including activities to address water quality impairments and habitat loss.

EPA's State Revolving Funds (SRFs) provide capitalization grants for state loan programs for water and wastewater infrastructure, with specific projects identified at the state and local levels. The estimated amounts ($29.7 million for the Clean Water SRF and $29.1 million for the Drinking Water SRF) are based on a projected distribution of California's total SRF allocation.